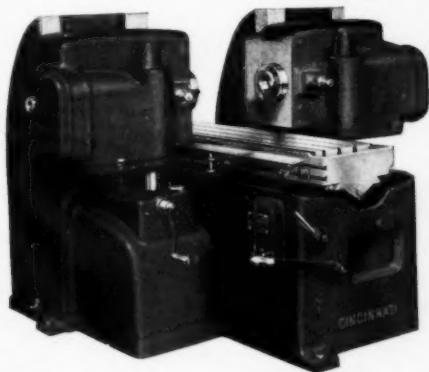


# Hitchcock's Machine Tool Blue Book

MAY, 1929

TWENTY-FOURTH YEAR



## Cincinnati Hydromatics !

These Hydraulic Feed Milling Machines have built an outstanding reputation on actual performance in every industry. You get exclusive, profit-making features at no extra cost when you install a Cincinnati Hydromatic. The flexibility of the machine is not matched, making it ideal for small lot as well as high quantity production.

*Get Performance Facts on the Hydromatic!*

**The Cincinnati Milling Machine Co.**

Cincinnati, Ohio

# GRIDLEY AUTOMATICS

*Screw Machines and Chucking Machines—  
built only by*

**THE NATIONAL ACME COMPANY**

**G**RIDLEY AUTOMATICS—  
Single and Multiple  
Spindle, both bar and chuck-  
ing types, are built and will  
continue to be built at our  
Windsor, Vermont, Plant.

For over twenty-five years GRIDLEY  
and ACME Automatics have been  
well and favorably known to the  
metal working industry, and in their  
present improved form, represent  
the highest development in machines  
of their type.



Our large Sales and Service organiza-  
tion, thoroughly experienced in the  
design, tooling and operation of GRID-  
LEYS and ACMES, is ready to serve  
you on your production problems.

---

---

## THE NATIONAL ACME COMPANY

CLEVELAND, OHIO

WINDSOR, VERMONT

NEW YORK

DETROIT

CHICAGO

*Agencies in Principal Foreign Countries*

# Hitchcock's Machine Tool Blue Book

Controlled  
Circulation

25,000  
Monthly

MAY, 1929

TWENTY-FOURTH YEAR

## Think It Over!

In the larger industrial plants the inception or beginning of an order often is born in the brains of men who are not exposed to salesmen contact.

The manufacturer of machine tools can reach those men, who are so important from a sales standpoint, only by means of printers' ink.

With a 25,000 circulation that is under the control of the publisher—and controlled with the interest of the advertiser always in mind as the one important consideration—the BLUE BOOK penetrates to thousands of buying influences that are difficult if not impossible to reach in any other way.

That they are interested in its contents goes without saying. They are keenly interested in any offerings of new equipment which promises greater economy, increased production or a better product. Therefore, the importance to the advertiser of those thousands of new contacts afforded by the BLUE BOOK hardly can be overestimated.

From a dollars-and-cents standpoint, can any manufacturer of machine tools afford to overlook them?

*Published By*

**Hitchcock Publishing Co.**

508 S. Dearborn St.,

Chicago, Ill.

# A Drilling Machine with **Power *plus* Speed**



Easy to  
Operate.  
Built to  
Last.

Ball Bearing  
throughout with  
speeds from  
500 to 2000  
R. P. M.

## **American Maxi-Speed Sensitive Radials**

Are the most powerful machines of their kind ever built—drilling and tapping holes, up to and including 1 inch in diameter, faster, better and cheaper than they have ever been drilled or tapped before.

These machines, combining the convenience and range of a radial drill with the speed and efficiency of a sensitive drill, open a new field to high speed drilling, guaranteeing a wider range of work and greater output at less cost per unit.

*Get the facts from our folder—free on request*

## **The American Tool Works Company**

Cincinnati, Ohio, U. S. A.

**LATHES**

**RADIALS**

**SHAPERS**

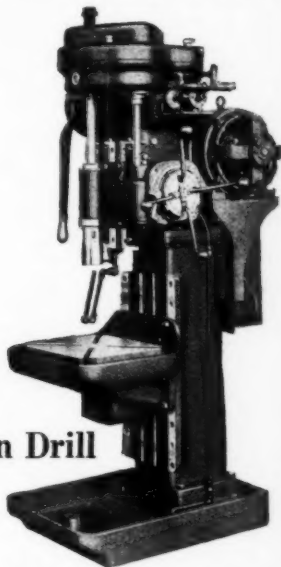


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# Rigidity and Simplicity

with  
16 SPEEDS  
and  
16 FEEDS

## The SUPER-- SERVICE Production Drill



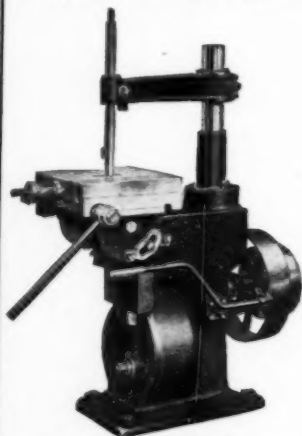
A more substantial spindle mounting provides great rigidity. Instead of the ordinary sliding spindle sleeve, the spindle slide is constructed like the ram of a punch press for greater accuracy and rigidity, especially when multiple heads are used. Other features are equally distinctive and desirable.

*Write for Booklet SSV-1*

**The Cincinnati Bickford Tool Co.**  
OAKDALE, CINCINNATI, OHIO

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# BAKER KEYSEATERS



**Built in  
Five Sizes**

**Designed  
for  
Miscellaneous  
Keyseating  
and  
Slotting**

**No. 0 KEYSEATER**  
**Capacity 1" Wide—9" Maximum Stroke**

***Exclusive advantages in securing Accuracy and  
High Production are:***

- 1. Draw Stroke Drive.**
- 2. Upper Support for Cutter Bar.**
- 3. Tilting Table (for Taper Keyseats).**
- 4. Simplicity In Operation.**

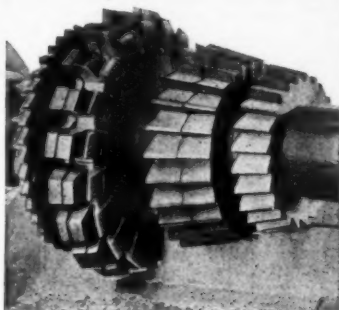
***Write for Catalogue***

**BAKER BROTHERS, INC., Toledo, Ohio**

***Builders of Boring, Drilling, Tapping,  
Keyseating and Slotting Equipment.***

---

**Look**  
to the  
**REAL**  
**COST**  
for



## **Real Cutter Savings**

It is not the first, but the real cost—first cost plus "upkeep"—that determines the economy of a cutter investment.

It will profit you to take this view when you buy cutters. Brown & Sharpe Cutters give the lowest cost when you figure real cost.

Both formed and special cutters can be made for customer's requirements in any size, for any type of drive, and for any purpose. Customers are urged to make use of our manufacturing facilities and engineering experience to solve their milling problems.

**Address Dept. HB.**

# **BROWN & SHARPE**

**BROWN & SHARPE MFG. CO.**



**PROVIDENCE, R. I., U. S. A.**

# It's Your Move!



**M**ONARCH engineers have made the first move — developed high-speed, helical-gear, Timkenized Lathes especially to handle tungsten-carbide cutting tools to their breaking point—lathes that will increase production and lower machining costs **enormously**.

Now it's **your** move! It's up to you to keep pace with new developments—to adopt this new and better method of machining metals. It's your move to increase your production and lower your costs. Monarch High-speed Helical-gear Timkenized Lathes equipped with tungsten-carbide cutting tools help you make the right move.

Your next move is to find out how Monarch High-speed Lathes increase production and lower costs. Write today for bulletin illustrating these new super-lathes in detail.

**The Monarch Machine Tool Co., Sidney, O.**  
**New York Sales Office: 857 Graybar Bldg.**

## *Monarch lathes*



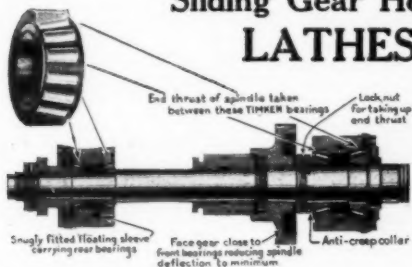
*Helical Gears - Timken Bearings*  
**SMOOTHER...QUIETER...MORE POWERFUL**



# Features!

**NEW  
MODEL**

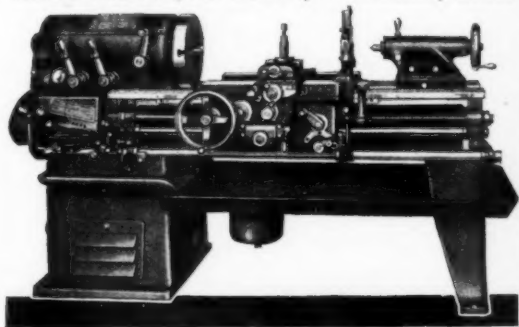
## **REED-PRENTICE Sliding Gear Head LATHES**

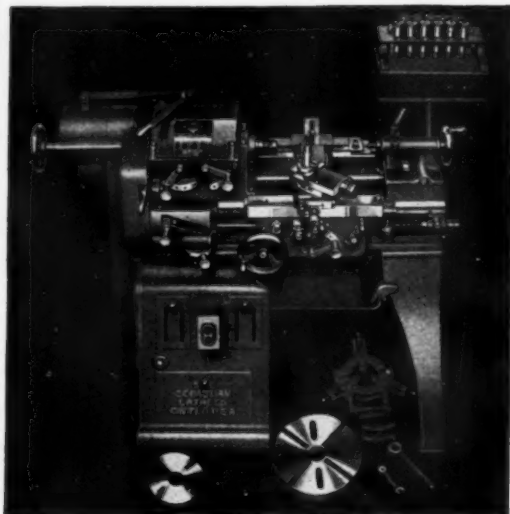


Four Bearing Precision TIMKEN Spindle Mounting.  
Headstock gearing of SAE 3250 electric furnace steel.  
Spindle of SAE 6140 heat treated chrome Vanadium Steel.  
Cross feed screw heat treated chrome Vanadium Steel with double ball thrust, etc.

*Our circulars detail complete construction features—send for them.*

**REED-PRENTICE CORP., Worcester, Mass.**





**11" Gold Seal  
Heavy Duty  
Precision  
Tool Room  
Lathe**

Built for heavy cuts and fast work, yet aligned with an accuracy of .0005". Graduations are provided at every point. The hole through the spindle is  $1\frac{1}{16}$ " diameter, and the lathe takes collets up to  $\frac{3}{8}$ ". All bearings are over-size. Made in motor, and single pulley belt-driven models.

**The Small Lathe  
you have been looking for**

Powered far beyond its apparent size, generously proportioned and equipped with a completeness unequalled in its field, the 11" Gold Seal Heavy Duty Precision Tool Room Lathe offers the manufacturer a long needed addition to his lathe equipment.

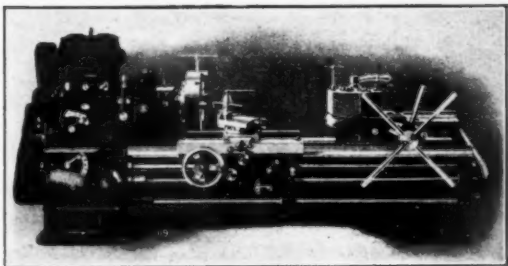
The time saving convenience, precision and versatility of this machine will reduce the cost of producing a wide range of parts—much work can be handled with it that formerly had to be done upon a larger machine.

*All details sent upon request*

**THE SEBASTIAN LATHE COMPANY**  
313 Culvert Street, Cincinnati, Ohio  
NEW YORK ADDRESS: Room 372, 50 Church St.

**SEBASTIAN LATHES**

# To Cincinnati Lathes



are fitted any standard or special attachments also tooling equipment as needed by the user.

## **WE TOOL UP COMPLETE FOR YOUR JOBS**

These latest lathes have been designed to withstand double the horse power of the motors recommended.

May we co-operate in suggesting for your work the equipment to produce profits?

Specify "CINCINNATI" Lathes and be sure of the quantity also quality work you produce.

### **BETTER BE SAFE THAN SORRY**

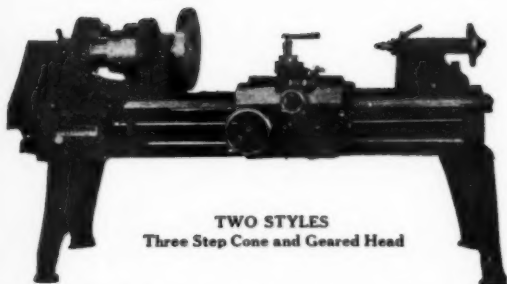
Sizes 16" to 32" either Cone Type or Geared Head, belt or motor drive.

*Do you want latest catalog?*

**Specialists 25 years**

## **The Cincinnati Lathe & Tool Co.**

**Oakley, Cincinnati, Ohio**



**TWO STYLES**  
**Three Step Cone and Geared Head**

**16"x6' New Design**     **\$525.00**  
 Weight 1900 lbs.

**18"x8' New Design**     **\$585.00**  
 Weight 2100 lbs.

3-step cone, double back gear, quick change gear, graduated compound rest, steady rest, lead screw and feed rod, tool post, centers, countershaft and wrenches, ready to run.

A lathe in the **INEXPENSIVE** class, for your shop equal to, in all respects, lathes of much higher price, having all their features:

**Alignment and Precision**  
**Speed in Production**  
**Ease of Operation**  
**Ability on all Work**  
**Low cost of Upkeep**  
**INEXPENSIVE COST to YOU**

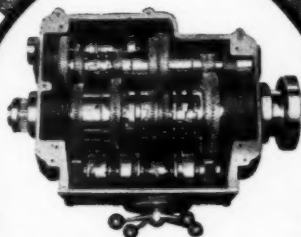
Made in 16" and 18" swing from 6' to 18' length of bed. Either 3-step cone belt drive or All Geared 9-Speed Drive Head for 2 H. P. Motor.

*Write us for full information and **PRICES***

**The Rahn - Larmon Co.**  
 2943 Spring Grove Ave.,     **CINCINNATI, OHIO**



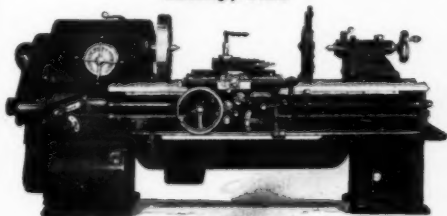
# MONOTROL

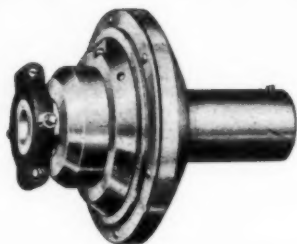


## Precision Production

The many exclusive features of Monotrol Headstocks cannot be fully explained here—but literature fully describing and illustrating the advantages of the single lever direct reading dial spindle speed control, herringbone constant mesh gears and Timken bearings will be sent upon request. Get this information and convince yourself that Monotrol Engine Lathes will do your work faster, better and in less time.

**The Sidney Machine Tool Co.**  
**Sidney, Ohio**





## **Quit Trifling—**

With the most important function of production.

The Conway Disc is the last word in friction clutches. Install one and the control of your machines is no longer a problem.

You are only temporizing with starting and stopping until you adopt the efficient command of the Conway Disc Clutch.

## **The Conway Clutch Co.**

**West 6th Street, Cincinnati, Ohio**

*"It is a splendid Clutch"*

# Save \$700 to \$1000 on a Miller!

**O**RDERS were received for as many No. 2 Universal Millers in thirty days at the new low prices as were sold in the preceding twelve months.

With these machines a high standard of accurate milling can be maintained. The standardized spindles are forged from high carbon chrome nickel—every gear, shaft, clutch and stud in the driving and feed mechanism is either pack hardened or heat treated.

## Consider these feature also:

- (1) Vee flat overarm; (2) complete interchangeability of arbors, chuck, etc.;
- (3) fully inclosed motor—readily accessible; (4) quick-stop brake; (5) disengaging hand wheels;
- (6) automatic lubrication; (7) 16 feeds—16 speeds; (8) sensitive control starting lever; (9) pilot wheel for each operation to overarm; (10) gauging strip.

No. 2 Ohio  
Universal  
Constant Speed  
**\$ 1775**

No. 3 Ohio  
Plain  
Constant Speed  
**\$ 1880**

**Either type  
equipped for motor  
\$150. extra.**

## Reasons for Low Prices

- (1) Increased production makes possible manufacturing economies.
- (2) **While incorporating every feature essential for economical milling**—these machines run right handed and do not have reversing mechanism, dual control or frictionless bearings.

WRITE FOR MILLER CATALOG

**THE OESTERLEIN MACHINE CO.**  
CINCINNATI, OHIO

**OESTERLEIN**  
OHIO  
MILLING  
GRINDING DRILLING  
EQUIPMENT

# For Nearly Thirty Years

Since 1900, to be exact, The Cleveland Planer Company has been building Open Side Planers exclusively. During these years, through continual study and experimentation, the company's engineers have done much to aid this progress and solve the problems of rapid metal removal. The Cleveland Planer of today is the result—simplicity of construction is its basis. The number of parts have been reduced to a minimum to assure long life and the greatest ease in operation.

## The Cleveland Planer Company

*Established 1900*

3148 Superior Ave.,

Cleveland, Ohio

Over 1100 Installations

Send  
for  
*Descriptive  
Folder  
NOW!*

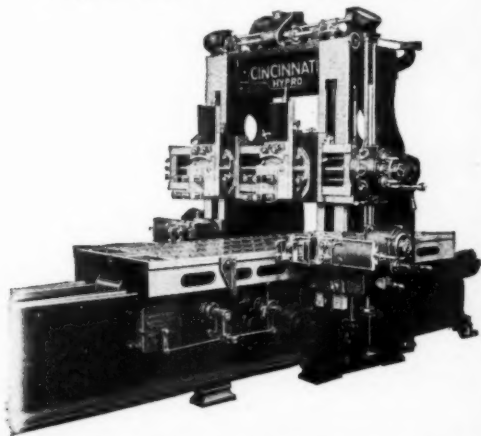
26 in.  
to  
72 in.



The Open Side Planer with the Column  
Base Cast Integral with Its Closed Top Bed.

# High Production Features

**Selective Dial Feed**  
**Rail Clamping Device**  
**Instantaneous Rail Lift**  
**Rapid Power Traverse**  
**Forced Lubrication**  
**Combination Steel**  
**Herring Bone and Spur Gear Drive**  
**Long Inverted Dovetail Down-Slide**

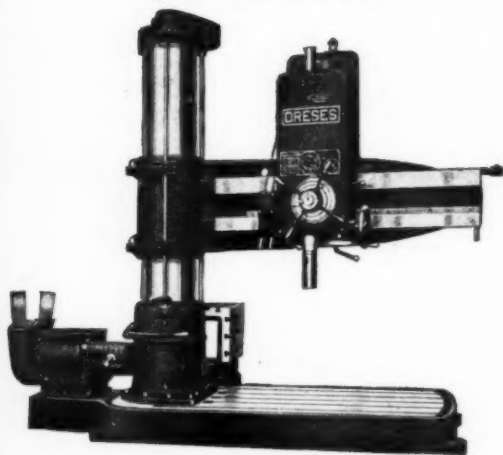


**The Cincinnati Planer Co.**  
**Cincinnati, Ohio**

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# **We have—"IT" The Radial Drill**

**You need for your  
Special Work**



*Write for Prices  
and Catalog*

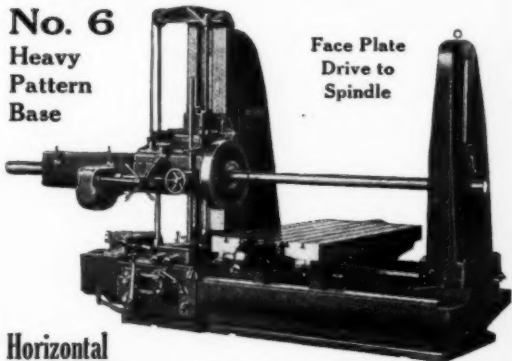
**The Dresses Machine Tool Co.**  
**CINCINNATI, OHIO**

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# The New Improved **DEFIANCE**

**No. 6**  
**Heavy**  
**Pattern**  
**Base**

**Face Plate**  
**Drive to**  
**Spindle**



## **Horizontal** **Boring, Milling, Drilling and Tapping Machine**

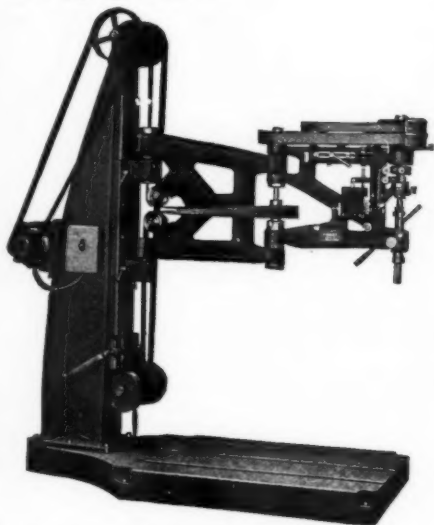
The Defiance Line of Horizontal Boring Mills embodies many special features including independent rapid traverse to head and platen in all directions, moving 84" per minute; thoroughly enclosed head; forced feed lubrication; centralized control; unit construction of head, feed and speed boxes, and many more efficient aids to production. Simplicity, great strength and ample power enable you to handle a wide range of work with profit.

*Write for the descriptive folder, or for the complete Catalog of "The Defiance Line" of Cylinder Boring Machines, Heavy Service Drilling Machines, Rail Drills, Horizontal and Vertical Multiple Drilling Machines, Multiple Tapping Machines and Valve Grinding Machines.*

## **The Defiance Machine Works** **Defiance, Ohio**

**Designers and Builders of Precision-Production Machine Tools and  
Special Woodworking Machinery**

**THE HAMMOND AUTOMATIC**  
Tapping Machines are designed  
to rapidly and efficiently perform  
drilling, tapping, stud, nut and screw  
driving operations.



Drilling radius.....4' 0"

Capacity  $\frac{3}{4}$ " drills,  $\frac{5}{8}$ " taps,  $\frac{1}{2}$ " studs

*Write for full information*

**The Hammond Manufacturing Co.**

7808 Kinsman Road,

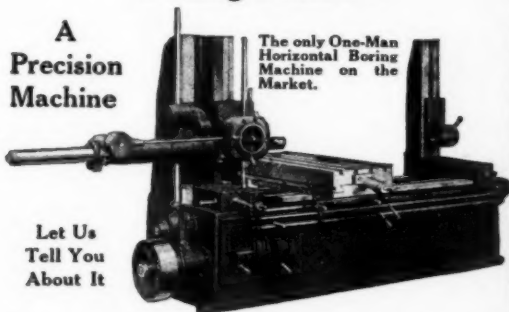
Cleveland, Ohio



# Lambert Horizontal Boring and Milling Machine

**A  
Precision  
Machine**

The only One-Man  
Horizontal Boring  
Machine on the  
Market.

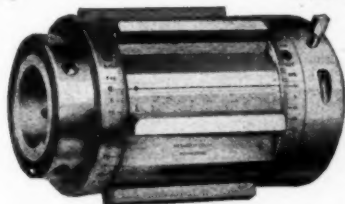


Let Us  
Tell You  
About It

## Lambert Expanding Reamers

Shell style  
from 5" up

Machine Reamers  
from 1 1/4" up.



3" Tool expands 1", others in proportion to size.

High Speed Blades, every Tool Guaranteed.

**A GREAT TIME SAVER.**

*Full Details, Specifications, Price, etc., on Request*

**Lambert Machine & Engineering Co.**

East 55th St. at Euclid Ave., CLEVELAND, OHIO

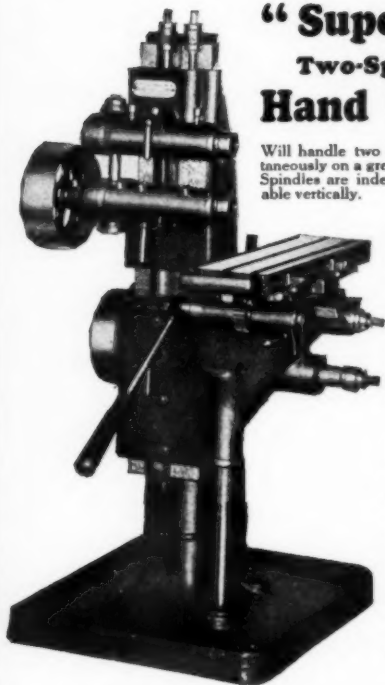
# **"Superior"**

## **Two-Spindle Hand Miller**

Will handle two operations simultaneously on a great variety of work. Spindles are independently adjustable vertically.

Slides move freely without cramping, since all guiding surfaces are long in proportion to their width. All sliding members are fitted with adjustable gibs, and can be securely clamped without disturbing adjustment.

Especially adapted to cut step-cut piston rings, as it will handle both sides at once; also for splitting crankshafts and connecting rod bearings, both sides of which are also handled at once. Many "Superiors" are at work on such operations.



### **One plant already uses fifty**

of these machines—not to mention the wide use to which they are being put in a large number of plants. Furnished for direct drive from main shaft, (friction countershaft built integral with machine) or for motor drive.

*Descriptive Literature Gladly Sent on Request*

We are also Designers and Manufacturers of Special Machinery, Tools, Dies, etc., as well as of Experimental and Model Work.

## **Superior Machine & Engineering Co.**

**1910 Ferry Park**

**1-1**

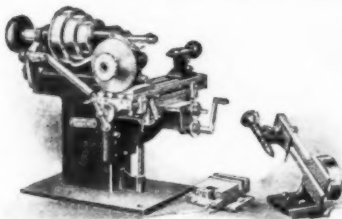
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**Detroit, Mich.**

# HARDINGE

## Milling Economy!

With New Conveniences and a Wide  
Range of Feeds, This Miller Affords  
You Real Savings



**Cataract Bench Milling Machine**

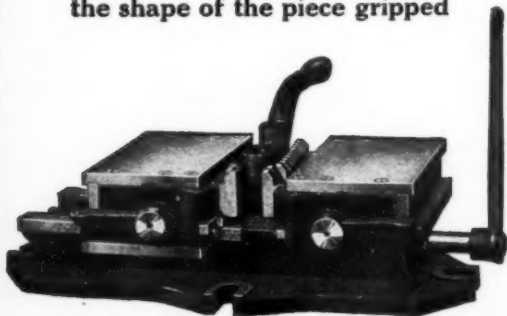
MANY YEARS of practical experience taught the designers and builders of this Bench Miller just what ought to go into a machine of this sort. You will find it unusually useful, doing its work with precision accuracy, and having available a wide range of feeds for practically all jobs that come within its range.

*Complete data and the interesting  
price gladly sent you on request*

**Hardinge Brothers Inc.**  
4149 Ravenswood Ave.  
Chicago, Ill.

# What You've Been Looking For

A vise with jaws that assume  
the shape of the piece gripped



**Berjo**

## Machine and Bench Vises

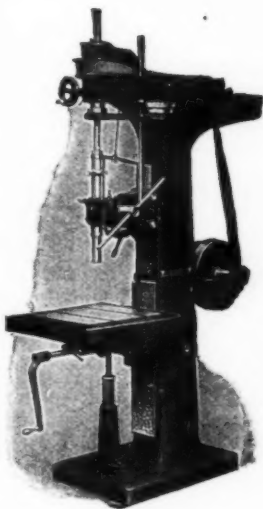
Berjo vises have multiple compensating jaws which hold *regular* or *irregular* shaped parts positively and securely. The principle

is simple. A practical mechanical arrangement back of the jaws allows them to follow the contour of the work. Two main jaws, one fixed, one movable, hold the segmented compensating jaws. Berjo vises are suitable for all classes of work, but particularly adaptable to the tool room and the shop where a number of variously shaped pieces are going through.

*Manufactured by the makers of Avey Drilling Equipment.*

**The Avey Drilling Machine Co.**  
**CINCINNATI**

# The *Avey*



**Makes  
Big Jobs  
Look  
Small**

**The Avey Drilling Machine Co.**  
**CINCINNATI, OHIO**

# Designed for High Speed Work

Ready for the Job

**C-O**  
**14-inch**  
**High-Speed**  
**Sliding**  
**Head**  
**Sensitive**  
**Drill**

**3,400**  
**to**  
**10,000**  
**R. P. M.**

**More**  
**Holes**  
**per**  
**Hour!**



Total height, 41".  
Vertical adjustment of head, 7½".  
Diameter of spindle, 5/8".  
Travel of spindle, 3¼".  
Maximum distance of bottom of chuck  
to base table, 10½".  
Size of base table, 9½" x 12½".

Speed of spindle, 3,400-5,600-10,000.  
Largest size of drill, 5/16".  
Distance from column to center of sp. 7¼".  
Size of sp. pulley, 1½"-2¼"-3" x 1¼" face.  
Bench space, 15" x 20".  
Net weight, 180 pounds.  
Crated weight, 220 pounds.

*Complete Information gladly furnished*

## **Canedy-Otto Manufacturing Company**

**Main Offices and Factory—Chicago Heights, Illinois**

**New York Branch**  
407 Broome St.

*Complete stock  
carried at branches*

**San Francisco Branch**  
955 Folsom St.

# The Improved Canedy-Otto No. 29

Ready for the Job



Completely  
Motorized—  
Also Furnished  
Belt Driven

3 Spindle Speeds  
720-1430-3000 R. P. M.

The Improved Canedy-Otto Sensitive Bench Drill comes complete with toggle switch, cord, socket,  $1\frac{1}{2}$ " endless leather belt, and chuck. The motor is adjusted on a sliding base that maintains the proper tension on the belt at all times, and cuts lost motion and vibration to the minimum. Now equipped with a 3-step cone pulley which gives three spindle speeds of 720, 1430 and 3000 R. P. M. Complete information, with close price, upon request.

## Canedy-Otto Manufacturing Company

Main Offices and Factory—Chicago Heights, Illinois  
New York Branch 407 Broome St. Complete stock carried at branches San Francisco Branch 955 Folsom St.

**Taylor & Fenn Belt Driven  
No. 12 Spring Press**



**UNIFORM BLOW  
SPRING PRESSES**

**Are made in  
three sizes,  
with either  
single or  
double action**

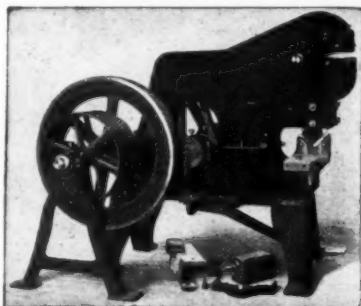
**Our No. 12 Belt Driven Spring Press, illustrated above, has a stroke of  $3\frac{1}{4}$  inches. The foot treadle operates a safety clutch attached to the flywheel, which automatically stops the machine after each stroke regardless of whether the treadle is released or held down by the operator. The clutch can be adjusted for a continuous stroke if desired.**

*Descriptive circular gladly sent upon request*

**The Taylor & Fenn Co.  
Hartford, Conn., U. S. A.**



# BELOIT



## Combined Power Punch and Shear

Built in seven sizes. Nos. 51, 52, 53, 54, 55, 55½ and 56

Direct connected motor or belt drive

**T**HE best all-around punch and shear in a combined machine of moderate cost. Really three machines in one, for it combines the single end punch with the alligator shear for flat bars, and the round cutters for round bars—and all for the price of one single end machine!

**H**EAVY, substantial, amply back geared to require the minimum amount of power, compact, easy to operate. Can be equipped with angle shearing attachment, angle notching and coping attachments if desired.


*Write Today for Catalog and Prices*

**Hendley & Whittemore Co.**

100 S. State St., BELOIT, WIS.

**PUNCHES—SHEARS—BENDING ROLLS**

# Illinois Plain and Surface Grinder



This machine has been designed to meet the popular demand for those wanting a general purpose grinder. One end is arranged for surface grinding and the other end for tool or plain grinding.

## Special Features

**Base:** Box type construction, with liberal bearing space for knee, insuring accuracy.

**Knee:** Supported by elevating screw having ball thrust bearing. Hand wheel graduated in thousandths, long bearing on column.

**Spindle:** Made of High Carbon Steel, heat treated, runs in 4 Timken tapered roller bearings, adjustment collars to each bearing. Bronze bearings furnished, if desired.

**Countershaft:** Ball bearing with tight and loose pulley and belt shifting device.

**Lubrication:** Alemite system for spindle and countershaft.

*Write for Complete Specifications and Prices*

**Illinois Machine & Mfg. Co.**  
**LaSalle, Illinois**

# STANDARD

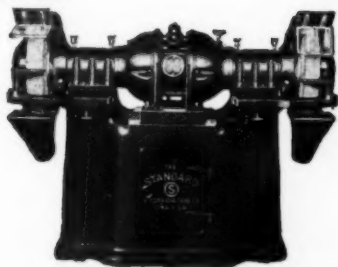
**Grinding, Polishing and  
Buffing Machines**



3-5-7½-10 and 15  
H. P. G. E. 40°  
Motor. S. K. F.  
Ball Bearings.



Made in 3 and 5  
H. P. G. E. 40°  
Motor. S. K. F.  
Ball Bearings.



## HEAVY DUTY GRINDER

G. E. 40° Motor and Push Button Control.  
Four S. K. F. Ball Bearings. Nickel Steel  
Armature Shaft. Made in 5, 7½ and 10 H. P. sizes.

**Angle Plate Grinders, Electric Drills, Grinding, Polishing  
and Buffing Machines in various types and sizes.**

*Established 1912*

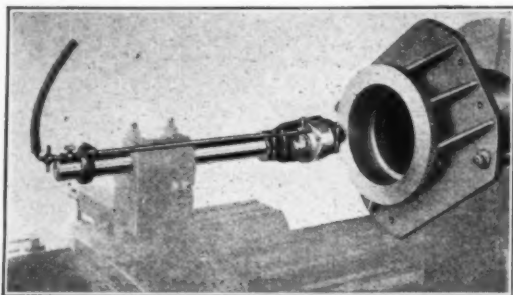
*Write for Late Catalog*

**The Standard Electrical Tool Co.**  
1938 W. 8th St., Cincinnati, Ohio

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## Finish Deep Bores In Original Setting

The accompanying photograph shows a 30,000 R. P. M. grinding unit finishing a deep bore in its original setting. The rigid mounting and the high speed, vibrationless unit assures extreme accuracy. This application is finding wide use on lathes and boring mills for bores  $5\frac{1}{2}$ " diameter and upward.



**Type E-6, 30,000 R. P. M. Pneumatic Turbine Drive—Equipped with long tail stock for deep bore grinding.**

Onsrud Pneumatic Turbine Grinders constitute an ideal drive for delivering the required surface speeds with sufficient power to give small wheels their maximum cutting capacity—increasing productiveness and assuring extreme accurateness.

The principle of the Onsrud Pneumatic Turbine represents the most desirable condition in which motive power is applied to spindles of high velocity—it involves no other wearing parts but the bearings. These are kept cold by the exhaust air which also prevents spindle expansion. Bearings yield from 50 to 100% longer life than bearings of belt driven spindles.

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**Onsrud Machine Works, Inc.,** 3906 Palmer St.,  
CHICAGO, ILL.

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# For High Production Use BRADFORD Drilling and Tapping HEADS



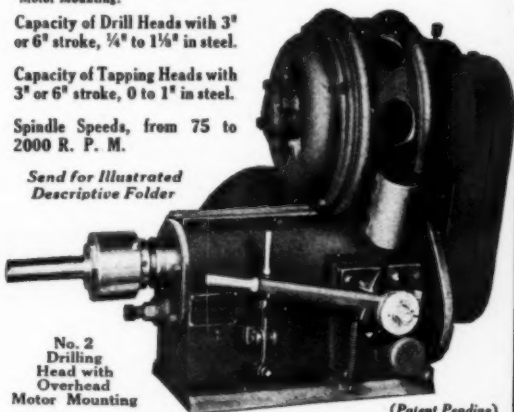
No. 2 Drilling Head  
with Endwise  
Motor Mounting.

Capacity of Drill Heads with 3"  
or 6" stroke,  $\frac{1}{4}$ " to  $1\frac{1}{2}$ " in steel.

Capacity of Tapping Heads with  
3" or 6" stroke, 0 to 1" in steel.

Spindle Speeds, from 75 to  
2000 R. P. M.

*Send for Illustrated  
Descriptive Folder*



No. 2  
Drilling  
Head with  
Overhead  
Motor Mounting

(Patent Pending)

Also ask for Information regarding BRADFORD LATHES—  
made in sizes from 14" to 48" inclusive

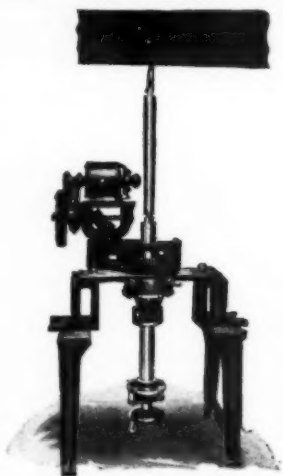
## The Bradford Machine Tool Co.

*Precision Lathe Builders Since 1840*

657-671 Evans Street,

Cincinnati, Ohio

# Something New



## The Pedrick Boring Unit

This picture of drilling an overhead beam is only an indication of what the Boring Unit can do. It is intended more for other work than for drilling, but to get the whole story, write for a circular.

The Boring Unit removes the limitations from the portable boring bar, and reaches a field of work that otherwise requires the largest machine tools.

## Pedrick Tool & Machine Co.

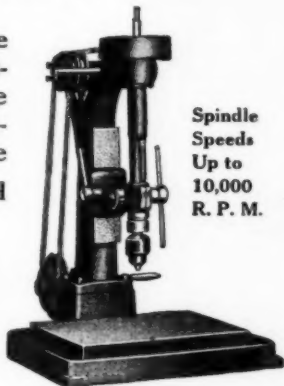
3644 N. Lawrence St., Philadelphia, Pa.

Builders of Portable Cylinder Boring Bars, Crank Pin Turners,  
Portable Millers, Pipe Benders, etc.

# ***Don't Forget—***

**Wood, Fibre, Rubber,  
Paper, Mica, Bakelite**

as well as the  
ordinary met-  
als can be  
drilled to ad-  
vantage on the  
**Leland-Gifford  
Super-  
High-Speed  
Ball Bearing  
Drilling  
Machine**



**Spindle  
Speeds  
Up to  
10,000  
R. P. M.**

**Write us about this Drill to speed  
up your drilling operations.**

***Ask for Bulletin No. 502***

**Leland-Gifford Company, - Worcester, Mass., U.S.A.**

***BRANCHES***

**BOSTON CHICAGO CLEVELAND  
DETROIT NEW YORK  
PITTSBURGH ROCHESTER**

***AGENTS***

**Hendrie & Balhoff  
F. E. Satterlee Company  
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F. F. Barber Machinery Co.**

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Minneapolis  
San Francisco  
Toronto**

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# **LELAND - GIFFORD**

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**FOOTBURT**

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## **A Single Spindle Footburt Sipp Sensitive Drill**

**Made in three  
sizes of single  
and multiple  
spindle models**

### **More holes with this machine**

**Why?** Because you can change speeds in two seconds or belts in ten seconds—because the automatic idlers keep the belt pulling to capacity at all times—because the full ball bearing equipment and accurate machining gives a smooth, fast cut.

*Write for No. 650 Folders*

**The Foote-Burt Company, Cleveland, O.**

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**FOOTBURT**

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# Frew Automatic Tapper

[Patented.]

**F**AST tapping operations, accurate work, simplicity of operation and ease of adjustment are easily obtainable with FREW Automatic Tappers. The perfect spindle alignment provided by extra long bearings carried in Timken Roller Bearings, and the smooth automatic operation, enable you to maintain accurate and constant rapid production at a remarkably low tapping cost. Multiple spindle heads can be attached, or three tapper heads can be mounted on a special base. Foot lever attachment may be secured.

## Maximum Production— Minimum Tap Breakage

The long bronze bearings eliminate crooked tapping and tap breakage, and permit tap to withdraw from hole *without stripping the last thread*. The FREW will meet your most rigid requirements on standard long run jobs—its adjustments are so simple that even the short runs will pay.

**No. 1**  
**Capacity**  
**to  $\frac{1}{2}$ "**

## Outstanding Features:

Permanent spindle alignment—Elimination of "cocked" spindle—Wide belt surfaces—Simplicity of operation—Easy adjustment—Fewer parts.

*Write for Complete Information*

**The Frew Machine Co.**

**136 West Venango St.,  
Philadelphia, Pa.**



# **Economy Production On Small Parts Of All Shapes**



**Wide adjustability of feeds and speeds.**

**Work is clamped and ejected automatically.**

**Both hands left free to handle work.**

## **Stecher Automatic Universal Bench Drill**

A momentary pressure on the knee control under the bench, and the Stecher Automatic does the rest, leaving both of the operator's hands free to handle the work. It clamps the piece, feeds the drill thru it, and ejects it without a hitch.

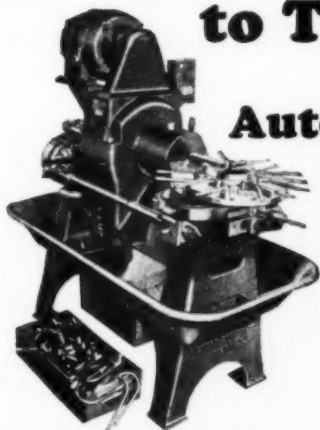
The number of holes that can be drilled in a given time is limited only by the capacity of the drill; the feed and speed of which are easily adjustable to the work in hand.

By merely pulling down the hand lever the Stecher will change from an automatic production tool with a power feed, to a high speed, hand feed, sensitive drill press.

*Send us a sample of your small parts to be drilled,  
and we will show you real economy*

**The Chas. Stecher Co.,** 2452 N. Greenview Ave.,  
CHICAGO, ILLINOIS

# **It Doesn't Pay to Thread on Automatics**



**Save Them  
for the  
Faster  
Production  
Work—  
Thread  
with the**

## **RICKERT-SHAFER Automatic Threading Machine**

**T**HE R-S Machine can be adapted to almost every job of threading—from the simplest to the most complicated. Combination tools can be supplied so that chamfering, reaming, facing, etc., can be done simultaneously with the threading and with one chucking.

**I**T is practically the only automatic threader which will maintain the accuracy demanded by automobile manufacturers. Backed by a company whose personnel have specialized on thread cutting for the past 35 years—who know **HOW** to produce threading equipment which will give you **REAL SERVICE**.

*Write for Descriptive Folder and Prices*

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**RICKERT-SHAFER CO., Erie, Pa.**

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# EXPANSION It's GRINDER-POLISHER NEW

For  
Efficient,  
Uniform,  
Economical,  
Flexible  
GRINDING,  
SANDING  
and  
POLISHING



(Patent Applied For)

## A New Resilient Wheel That Does Away with Glue, Loose Emery, Etc.

THE EXPANSION GRINDER - POLISHER eliminates spare wheels and aggravating delays. One wheel, with an assortment of abrasive bands of various grits and types, will serve every purpose. Ready in an instant—merely loosen one nut, slip off one band, slip on the other, tighten nut—and you're ready to go! No hours of waiting for glue to dry, no uneven or unbalanced wheels, variation in diameters, or lack of uniformity in the finished work.

*Write Today for the Descriptive Circular*

**The Abrasive Wheel & Eqpt. Co.**  
1545 Jefferson St., Philadelphia, Pa.

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# Grand Rapids No. 1½ Universal Cutter and Tool Grinder



*Newly designed* to meet the demand for a high grade machine of medium capacity at a moderate price. It has the sterling qualities that are built into all Grand Rapids Grinders, including exceptional ease of handling—and it sharpens tools right.

*Our "Universal Cutter and Tool Grinder" folder*, which is yours for the asking, pictures this modern machine in the following grinding operations:—face mill, form cutter, angle cutter, surface, gear cutter, reamer, end mill, spiral and plain milling cutter, internal and cylindrical. It also illustrates Grand Rapids No. 2 Universal Cutter, Tool and Drill Grinder, and Nos. 3, 4 and 5 Universal Cutter and Tool Grinders.

*Don't fail to write for folder; it's interesting*

## Gallmeyer & Livingston Co.

342 Straight Ave., S. W.,

Grand Rapids, Mich.



**This Shows  
Type "C"**

Also made  
in other  
types and  
sizes

# VIM

**Screw Driving  
Nut Setting**

**Electric  
Bench  
Machine**

*It's Versatile!*

For general production work or special jobs, use the VIM and you'll save time and money. Can be set up in less than 15 minutes—five or six machines can be used on a 12 foot bench. Easy to operate—especially recommended for female help—just a touch of the foot lever will drive wood or metal screws at 1000 r. p. m. bit speed. Speeds up production—

often doubling it—and should pay for itself in a month's time.

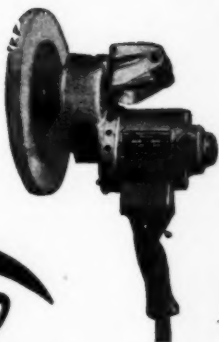
Besides driving screws and setting nuts these tools are adaptable to many and various uses, such as buffing, grinding, polishing, etc. Special attachments can be made to fit any special operations you may require. Put your proposition up to us. We have many models including our

**Portable Flexible Shaft Vim Tool.**

*Write for Catalogue and Prices*

**Vim Electric Tool Company**  
**149 Broadway, New York City**

**When it  
Comes To  
Rubbing  
Filler—Try**



*The*

**Nedco**

**Sanding and Polishing  
Machine**

**It Will Save You Time and Money  
and Do A Better Job**



The NEDCO is built for strenuous service, and uses any standard 9 $\frac{1}{4}$ " abrasive disc. Weight 12 lbs.

Equipped with  $\frac{1}{4}$  HP universal motor either 110 or 220 volts—working speeds  
Model "N" 1750 R. P. M.  
Model "S" 850 R. P. M.

**Price \$85.00** F. O. B. NATICK

*Write for Descriptive Circular*

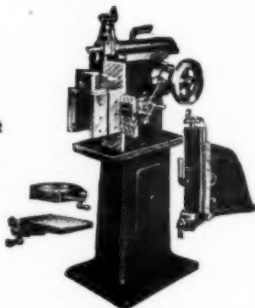
**THE NEDCO  
COMPANY**

**Dept. H  
NATICK, MASS.**



## ACCURATE and RAPID Shaping and Slotting on ONE machine

**"The  
Handiest  
Tool  
in the  
Shop"**



**7 in.  
Shaper  
Stroke**

**3½ in.  
Slotter  
Stroke**

### **The Rhodes Shaper and Slotter**

Will do keyseating, shaping, slotting, die making and intricate work of many kinds with only one set-up of the work. A few turns of a wrench converts the shaper to a slotter or vice versa.

The Rhodes is a well built, sturdy machine that is made to last. It speedily turns out work that satisfies the most exacting shop and soon pays for itself.

*Ask your dealer or write for  
CATALOG H22*

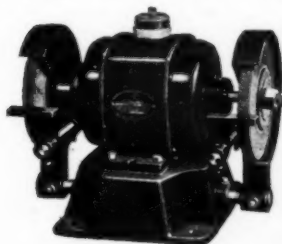
**The Rhodes Mfg. Company**  
944 Park Road,      Hartford, Conn.

**SHAPERS—RHODES—SLOTTERS**



# Winterhoff <sup>Portable</sup> Electric Grinders

Equipped with Timken Tapered Roller Bearings



No. 1-B  
8" & 10" Grinder

Complete as illustrated, with two 8 inch grinding wheels, two wheel guards, two tool rests, cord with detachable plug and switch mounted directly on motor. Motor is  $\frac{1}{2}$  h. p. repulsion induction, 110-220 volts. A sturdy, accurate machine that stands up under any usage. Other models include the No. 2-B, a Combination Tool and Disc Grinder, and the No. 3-B, a Double-End Disc Grinder.

*Send for Grinder Circular and Low Prices*

## Portable Electric High Speed Sensitive Bench Drill

Equipped with  $\frac{1}{4}$  h. p. motor, two step cone pulley giving speeds of 1100 and 2300 r. p. m., horizontal drive gives full power to the  $1\frac{1}{4}$ " endless belt furnished with machine. Driven cone has bearing support at each end; all parts accurately machined and interchangeable. *Positively the greatest value* ever offered in a machine of this kind. Furnished with square machined base at same price.



We also make a line of portable, electric Saws and Sanders

No. 0 JUNIOR DRILL  
 $10\frac{1}{2}$ " Swing, 0 to  $\frac{3}{8}$ " Capacity

*Detailed Information Sent Upon Request*

**Winterhoff Tool & Machine Co.**  
109 South Elkhart Ave., Elkhart, Ind.

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## **Abolish Expensive Hand Finishing** with a



### **Simplex-A Abrasive Band Grinder**

This grinder accelerates production and cuts costs. Hand emerying or filing operations are antiquated in comparison. The use of this new modern machine assures straight grain finishes with sharp edges. Details of this and other styles and sizes on request.

**WALLS SALES CORP., 96 Warren St., New York**

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# Type RF-M4 Machine



**Strand**

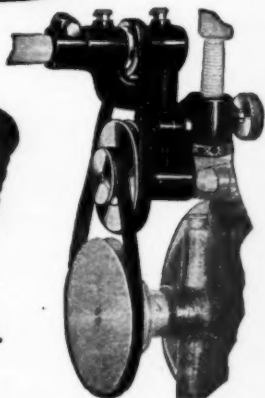
Capacity— $\frac{1}{4}$ H.P.

For

**Rotary Filing  
Grinding  
And  
Polishing**

10,000 R. P. M. Attachment Furnished Extra when Required. See Illustration.

## Attachments



**N. A. STRAND & CO.**

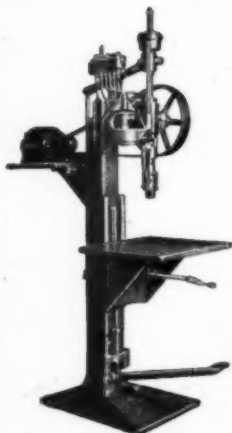
*Manufacturers*

**5001 No. Lincoln Street  
CHICAGO**

**PATENT APPLIED FOR**

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# A NEW Reynolds



**The No. 2  
Heavy Duty  
Automatic  
Screw Driving  
Machine  
with  
Magazine Feed**

**H**ERE is the latest addition to the cost saving REYNOLDS line. A medium size, heavy duty type machine that will drive, without change or adjustment, any three consecutive sizes of wood or machine screws from No. 6 to No. 14 inclusive, and up to  $1\frac{1}{4}$ " long. Quickly interchangeable sets of parts can be furnished to increase range if desired—no change is necessary for different length screws.

**T**HIS machine is a NEW REYNOLDS especially adapted for high speed production and long uninterrupted service, and has incorporated in it a number of improvements and refinements, chief of which is the Chuck with Equalizing Jaws.

**{ Tell us the dimensions overall of your work,  
the length and gauge of screws used, and we'll  
send facts and figures showing how the  
REYNOLDS will save YOU money. }**

**The Reynolds Machine Company**

**Dept. H. H.,**

**Massillon, Ohio**

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# car spotting with economy, safety and efficiency



## USES

1. Moving railroad cars from one loading or unloading platform to another.
2. Spotting cars over track hoppers of large industrial plants, coal yards, sand and gravel yards, etc.
3. Pulling heavy material along ground in storage yards, quarries and mills.
4. Pulling cars in and out of treating ovens and kilns.
5. Moving heavily loaded trucks from one building to another.
6. As capstan on a boat.

Write for Catalog and Prices

**FOOTE BROS.**  
**GEAR & MACHINE CO.**  
229 N. Curtis St., Chicago



# THE BULL DOG

$\frac{1}{2}$ "  
Heavy  
Duty

\$48



Universal  
Current

Let's Send You 16 Reasons  
why BULL DOG DRILLS  
Are the BEST

Week's  
FREE Trial

*If your dealer can't supply you, we'll  
gladly send you a biting BULL DOG  
Drill for a week's rough-house test.*

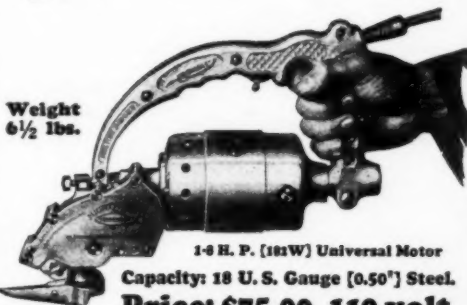
National Electric Products Co.  
Dept. H. 148 Baxter St., New York, N. Y.

47  
**\$1.00 Saved Per Day Means  
\$300. Per Year**

Follow The Tool Economy of  
Over 6000 Unishear Users

Unishear Cuts Your Cutting Cost in Half

## THE MIGHTY MIDGET



Weight  
6½ lbs.


1-4 H. P. (181W) Universal Motor

Capacity: 18 U. S. Gauge [0.50"] Steel.

**Price: \$75.00, 110 volt.**

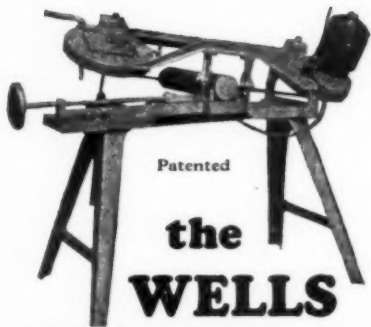
\$78.00, 120 volt.

*A MIDGET in size—a GIANT in power. Built with the  
precision of a watch and the ruggedness of a Pile Driver.  
Easier to handle than a pair of snips.*

The  Line

Includes many other models in heavier machines for cutting sheets up  
to ¼" boiler plate, all built on the famous Unishear principle.  
*Complete Catalog sent on request.*

**The UNISHEAR CO., Inc.**  
Main Office & Factory, New York, N. Y., 170 Lafayette St.



Patented

## the **WELLS** metal band saw

Incorporating the advantages of a hack saw with the cutting speed and economies of a band saw.

### features:

Self contained and portable if desired—rapid cutting with extreme accuracy—long life blades, low blade expense. A wide range of usefulness—economical operation.

The WELLS SAW cuts soft and hard, ferrous and non-ferrous metals—thick and thin sections—pipe, **tubing**, strips, etc.

No change of blade or speed—cuts high carbon steel then soft brass rapidly and accurately.

Hundreds of duplicate pieces cut with a variation of less than .004".

Saves stock—width of cut less than  $\frac{3}{4}$ "—blade .025" thick rigidly supported in six ball bearings.

Durable construction for hard service—strength without excess weight—ball bearing.

### **A Saw for Production, Maintenance and General Service**

We wish you to have descriptive literature—your name and address please—today? Saws will be placed on trial.

**Metal Saw Division**

**WELLS MANUFACTURING CORP.**

**Three Rivers, Michigan**

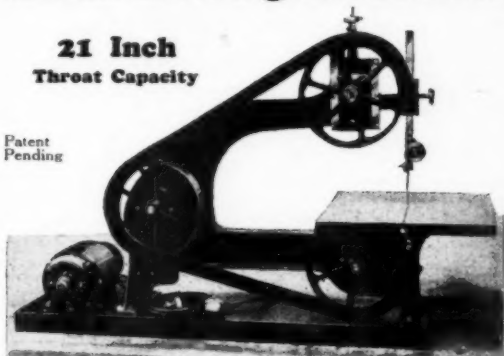
Exclusive territory being allotted—representatives and dealers interested, please write.



# The NEW Three Wheel Metal Cutting Band Saw

**21 Inch  
Throat Capacity**

Patent  
Pending



## For Economical, Efficient Operation

**H**ERE is the newest contribution to high grade and low cost production! A portable, bench type band saw which retains the good features of conventional design, yet introduces an amazing improvement in construction. The throat capacity of 21" and opening of 9" permits sawing to the center of a 42" circle. Substantial, durable, vibrationless it has the operating ease and handiness of a small tool.

## Saves Saw Blades

Operating economy is immediately evident in extra blade wear. By means of a three wheel arrangement, the saw blade touches upon 120 degrees instead of the excessive 180 degrees. This greatly reduces the degree of blade bend—crystallization and breakage are minimized.

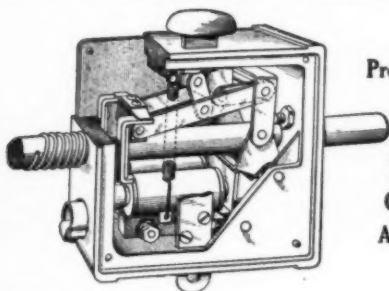
**[ Price Only \$175.00 F. O. B. Dayton ]**

**CITY MACHINE & TOOL WORKS**  
East Third and June Sts., DAYTON, OHIO

# SIMPLEX SAFETY STOPS

## INCREASE PRODUCTION QUALITY

On  
All Automatic Machinery



Protect Against  
Breakage  
Jams  
Mis-Feeds  
Over-Runs  
Any Change

USED ON:—

Book Cover Machines  
Drawing Frames  
Roving Frames  
Paper and Cloth Slitters  
Carton Fillers and Loaders  
Tooth Paste Tube Fillers  
Etc.,            Etc.,            Etc.

Operate on Lighting Circuit

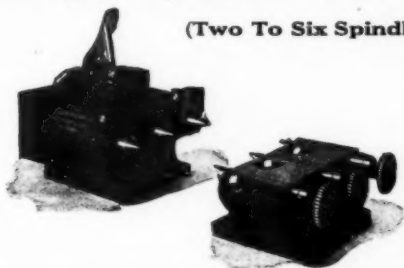
**SIMPLE—RUGGED—DEPENDABLE**

*Clip this page to your Letterhead as a request for Literature*

**The Atlantic Company**  
Box 133, Sta. B.,                      Brooklyn, N. Y.

# Multiple Spindle Centers

(Two To Six Spindle)



## Three Spindle Heavy Duty Centers

The spindles are indexed quickly and simultaneously by a ratchet lever movement, and provided with a large dial and lock bolt. Binders are provided for the spindles. The gearing is protected. The tail spindles have independent screw adjustment and independent binders, and the centers of the tail spindles are on the upper side of the spindles, so that cutters may pass close down to the center on small work. Can be furnished with tilting table.

Center Dist. of Spindles	Swing Over Slide	Length Between Centers	Weight Lbs.	Use Code
3 $\frac{3}{4}$ "	8 $\frac{3}{4}$ "	19" on 36" slide	175	Bore

Mr. User of **GARVIN** power milling machines of all types including dividing heads and all attachments, also **GARVIN** screw machines and grinders: if you are looking for new machines or attachments or repairs on above, call on us and we will take care of your requirements promptly.

## Manufacturers Of

Double end horizontal drills, milling machines and attachments, milling machine vises, dividing heads, index centers, single and multiple spindle, hand screw machines, cutter grinders, screw slotters, hand lathes, collet chucks, oval chucks, rotary tables, hex square milling fixtures, air devices, oil pumps.

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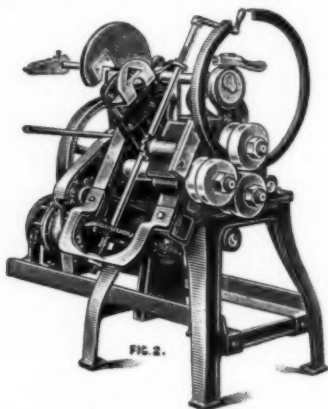
**JOHN B. STEVENS INC.**

25 Cleveland Place,

New York City

# EXCELSIOR

Circular Angle Bending Machine No. 14



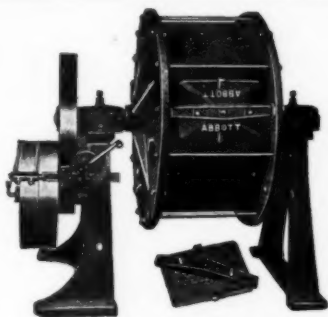
Band and Angle Iron  
Forming Machine No. 13



Mfgs. of Shearing and Punching Machines,  
Automatic Polishing and Buffing Machines.

**Excelsior Tool & Machine Co.**

East St. Louis, Illinois



## Economical Finishing

The finishing of small metal stampings, casting and forgings too often absorbs a greater proportion of the production cost than is necessary.

If your work is being finished by hand methods at present there are potential economies which the Abbott Ball Burnishing Process can give you.

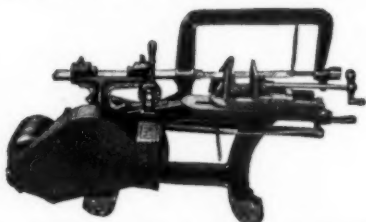
These savings are all the more interesting, to-day, when costs must be watched so closely.

*Let us submit a burnishing analysis of your work. Send samples.*

**The Abbott Ball Company**

1043 New Britain Ave., Hartford, Conn.

A GENERAL WORK  
**Motor Driven Hack Saw**  
Either Stationary or Portable



**Marvel Draw-Cut Hack Saw No. 2**

CAPACITY { 6'x6' on long stroke  
8'x8' on short stroke

Here is a saw that is proving very popular—a motor-driven, substantial, smooth-running, general-purpose Hack Saw of good capacity, that is sold **at a low price.**

It is furnished either with motor for a power circuit as a stationary machine, or with motor for an electric light circuit so it may be moved anywhere in the plant, the cord attached to the nearest lamp socket, and it's ready for business.

Motor is connected to driving crankshaft by silent chain, sprockets and intermediate cut gears enclosed in cast iron housing and guard and run in oil.

We can also furnish the No. 1 Motor Driven Hack Saw, portable, for light circuit, capacity 4'x4'. We make other Hack Saws one of them entirely automatic, and the popular Marvel Metal Band Saw, all furnished either belt or motor drive; also Marvel Punches, Shears and Rod Cutters,

*Tell us your requirements, and let send you description and price of what you need.*

**Armstrong-Blum Mfg. Co.**  
341 North Francisco Ave., Chicago, Ill.

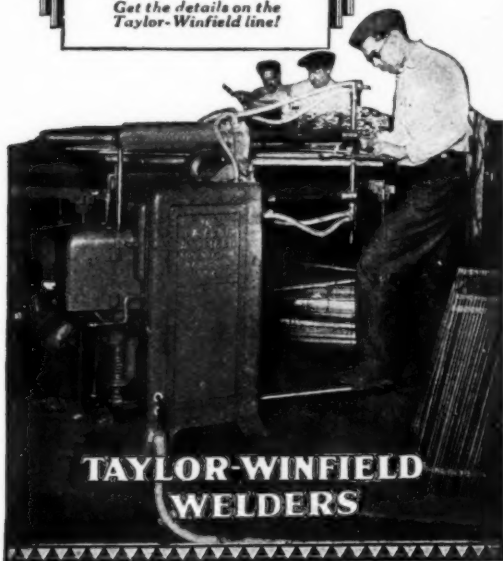
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## Improves *Your* Product

Not only will Taylor-Winfield electric welders simplify and economize production but they improve the product welded, thus affording added profit per unit manufactured.

*Get the details on the  
Taylor-Winfield line!*



**TAYLOR-WINFIELD  
WELDERS**

**THE TAYLOR-WINFIELD CORP.**  
**WARREN, OHIO**

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MACHINE TOOL AND GENERAL  
PURPOSE PUMP



## VOLUME PUMPS



MOTOR DRIVEN UNITS  
 $\frac{1}{2}$  to 5 H. P. 5 to 75 G. P. M.

**FULFLO delivers** coolant in volumes which promote efficiency in cutting tools.

**The full, copious flow** from the Fulflo is needed to make the best tool, with the best coolant, most effective.

**FULFLO does not clog**, therefore it always

works. It's the trouble proof pump.

**No machines stopped** to unclog pump. All the chips you can get into it pass through without harm.

**FULFLO has longest life** because its only pumping part does not wear.

MANUFACTURED BY

**FULFLO SPECIALTIES CO.,      BLANCHESTER, OHIO**



---

# **"GUSHER" COOLANT PUMPS**

## **Model B-L**

**[Reversible]  
Delivers  
53 gallons  
per minute,  
at 400  
R. P. M.**

## **Model TL-O**

**20 gallons**



*Long Lived  
Because  
They ELIMINATE  
Packing Nuts  
Foot Valves  
Relief Valves  
Priming  
Friction*

**"GUSHERS" are the simplest Coolant Pumps made—free** from the troublesome complications as listed above, they give an instant and easy flow without air bubbles and pulsations. Deep grooved ball bearings, automatic oiling and sufficient clearance for passing chips, grit and abrasive matter are some of the other features that aid in maintaining the highest efficiency and long life of these pumps.

**The Oil Window of the Model B-L as shown above —** enables you to instantly determine the level of the oil in the reservoir, and also shows the return stream from the overflow. Thus you can tell at a glance whether or not the oil is circulating. Also made in a small size—Model T-L—to deliver around 20 gallons per minute.

*Send for the Complete "GUSHER" Catalog listing  
the various models with capacities of  
from 12 to 75 gallons per minute*

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**The Ruthman Machinery Co.**  
528-534 E. Front St., Cincinnati, Ohio

---

# Cutting Keyways

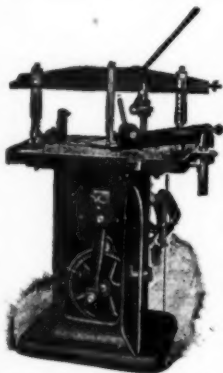
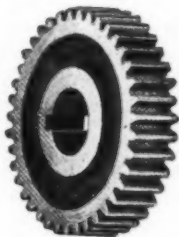
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**"DAVIS"**

**Insures Rapid,  
Accurate Production**



Whether you want quantity production of standard parts, or versatility to meet varied requirements, the Davis Keyseater gives complete satisfaction. Cuts keyways in pulleys, gear blanks, bell cranks, crank handles, etc., or can be used for slotting and grooving. Simply constructed, difficult to get out of order, and within its dimensions, produces accurate work at a low cost. Made in two sizes.

No. 1 cuts from  $\frac{1}{16}$  to 1-inch

*Write for complete information, including  
table of cutting time*

**Davis Keyseater Company**

255½ Mill St., Rochester St., N. Y., U. S. A.

---

# The Keyseater for the Up-to-date Shop

## The CATLIN

Combines  
**SPEED and ACCURACY**  
with **DURABILITY**



to make a keyseater that is the choice of government shops, automobile factories, navy yards, and all classes of factories and machine shops—both domestic and foreign.

The Catlin Keyseater is accurate to the thousandth of an inch, has half the moving parts of any other keyseater, constructed rigidly and ruggedly, built for continuous production, and is exceptionally easy to operate.

Illustration shows the Catlin No. 1 Keyseater which has a stroke adjustable to 13", cuts keyseats from  $\frac{1}{16}$ " to  $1\frac{1}{2}$ ", and is belt driven with 3 step cone pulley. We make keyseaters (belt or motor driven) for all sizes and capacities.

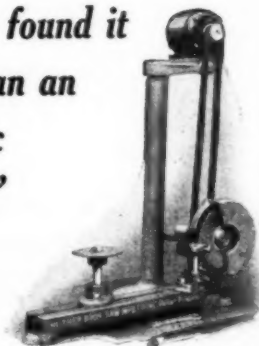
*Send for information and actual shop records*

**Chattanooga Machinery Company**  
2401 Bennett Ave., Chattanooga, Tenn.

---

**"We have found it  
faster than an  
automatic  
machine"**

*Patent Pending*



We offer the No. 2 Metal Cutting Saw Sharpener as a universal saw tooth grinder for shops and plants where the expense of installing an automatic unit is not warranted. It is so simple in operation and set up that with an average operator we have found it faster than an automatic machine.

It handles coarse and fine pitch metal cutting saws, inserted tooth and solid milling saws alternate bevel and straight teeth with equal efficiency. Its range with or without index is from 6" to 40" dia. *Furnished with or without motor drive.*

**Huther Bros. Saw Mfg. Co., Inc.**  
**Rochester, N. Y., U. S. A.**

# **WARDWELL**

## **Hack and**

### **METAL CUTTING**

## **Band Saw**

# **SHARPENERS**

**MAKE**  
**1 YEAR'S PURCHASES**  
**LAST 6 to 8 YEARS**

**REDUCE YOUR SAW COSTS**  
**SAVE TIME AND SAVE MONEY**

**USERS OF OUR MACHINES**

General Motors have 81

American Brass have 28

Continental Fibre have 30

Simonds Saw & Steel have 34

General Electric have 36

Bohn Aluminum & Brass have 14. etc.

**Write for Catalog**

## **THE WARDWELL MFG. CO.**

Makers of automatic machines for sharpening—Hack Saws, Hard  
Tempered Band Saws, Milling, Slitting and Screw  
Slotting Saws and all Woodworking Saws

*Manufacturers of the largest line of Saw Filers made in U. S. A.*  
**108 Hamilton Ave.,** **Cleveland, Ohio**

## No. 5 Jr. Punch



Capacity  $\frac{1}{4}$ " through 16 gauge  
Weight  $2\frac{1}{2}$  lbs.

## Scratch Awl & Drift Pin



Drop Forged — Alloy Steel-Hardened

## No. 10 Ball Bearing Punch



Capacity,  $\frac{3}{8}$ " through  $\frac{1}{4}$ " iron  
Weight  $8\frac{1}{2}$  lbs.

## No. 8 Imperial with base



Made in 3 sizes, Nos. 7,  $7\frac{1}{2}$ , 8  
Operating handles will not become  
disengaged. Roller Bearing.

### CAPACITY

$\frac{1}{4}$ " hole thru  $\frac{1}{4}$ " iron  
Weight, 16 lbs. Length over  
all,  $25\frac{1}{2}$ ".

Can be Furnished With or Without Base

## Angle Iron Notcher No. 60



Roller Bearing  
This Notcher and  
Bender has a  
Capacity  $3'' \times 3'' \times \frac{3}{8}''$   
angle

## Angle Iron Bender No. 61



Write for Catalog and Price List on Entire Line

**WHITNEY METAL TOOL CO.**  
95 Forbes Street, Rockford, Illinois

**You'd hate to go back to  
Oil Lamps——**

**THEN**

**WHY**

**Do  
Your  
Filing  
and  
Sawing  
by  
Antiquated  
Methods  
?**

**Type  
1-AP**



**THIS machine will boost  
your production and will  
save many dollars wasted  
the old way.**

**WHY NOT save 60%  
on your filing and sawing  
costs ?**

**THE J. & B. FILING  
and SAWING MA-  
CHINE is sure to pay  
for itself many times.**

*Write for Complete Details*

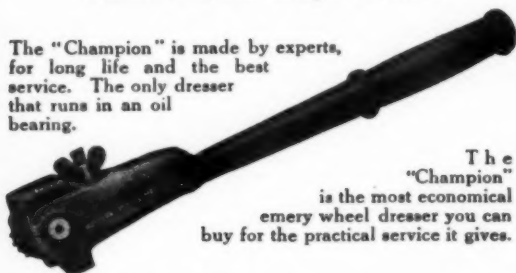
**LaPorte Machine & Tool Co., Inc.**

**LaPorte, Indiana**

# "Champion" Emery Wheel Dresser

Outlasts a Dozen Cheaper Dressers

The "Champion" is made by experts, for long life and the best service. The only dresser that runs in an oil bearing.



The "Champion" is the most economical emery wheel dresser you can buy for the practical service it gives.

The *cutters* are made of a special steel, heat-treated and tempered by a special process.

The *sleeve*, furnished with each set of cutters, revolves on the spindle and the cutters in turn revolve on it, providing a more perfect bearing for the cutter wheels.

The patented *spindle bearing*, which is made of steel and thoroughly hardened, serves as a bearing for spindle and a guide for cutting wheels, and it cannot turn in the handle; makes wobbling impossible.

The patented *handle* is heavy and strong, designed for long service, efficiency and economy.

The patented *handle cap* eliminates the old-fashioned set screw and serves as an upper-clamp for spindle bearing. Further, there are no moving parts. On account of absence of wear, the life of handle and handle cap is indefinite.

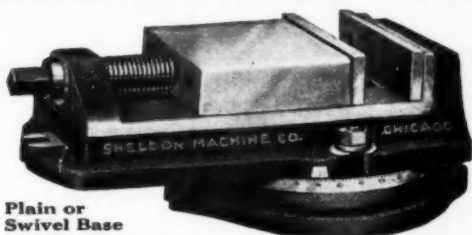
## Our Catalog also describes

Champion Tool Holders, Champion Expanding Mandrels, Machinists' Vises and Clamps, etc., and our large line of practical, hard-to-beat Shop Furniture. Copy upon request.

**The Western Tool & Mfg. Co.**  
SPRINGFIELD, OHIO



# SHELDON MILLING MACHINE VISES



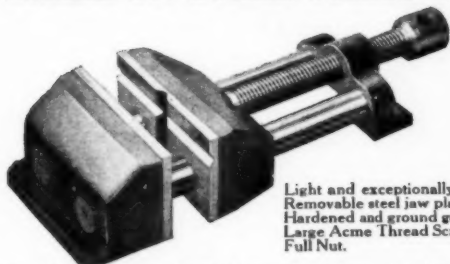
**Plain or  
Swivel Base**

The swivel vise is the plain vise with the addition of a circular base, graduated in degrees. It can be removed from the circular base and used as a plain vise if desired.

## Specifications and Prices

No.	Width Jaws	Depth Jaws	Jaws Open	Plain Vise		Swivel Vise	
				Weight	Price	Weight	Price
3	3 1/2"	1 3/8"	2 1/2"	15 lbs.	\$16.00	25 lbs.	\$20.00
4	4 1/2"	1 5/8"	3 1/2"	30 lbs.	\$20.00	45 lbs.	\$24.00
6	6 1/2"	2"	4 1/2"	70 lbs.	\$30.00	90 lbs.	\$40.00
8	8 1/2"	2 1/2"	6 1/2"	160 lbs.	\$45.00	225 lbs.	\$60.00

# SHELDON DRILL PRESS VISE



Light and exceptionally strong.  
Removable steel jaw plates.  
Hardened and ground guide bars.  
Large Acme Thread Screw.  
Full Nut.

No.	Width of Jaws	Depth of Jaws	Jaws Open	Weight	Price
D-4	4 1/2"	1 1/2"	4"	15 lbs.	\$12.00
D-6	6 1/2"	1 3/4"	6"	35 lbs.	\$18.00
D-9	9"	2 1/8"	9"	70 lbs.	\$24.00

**SHELDON MACHINE CO.** 3250 Cottage Grove Ave., CHICAGO, ILLINOIS

# Perfected Die Processing

Malformed dies, waste of material and time, and excess operating expenses are obviated by the use of this

## 4-Post Screw Press

The precision with which it aligns punch and die, its power and simplicity in operation, and the mechanical perfection of its design, enable one man to do more and better work than two men can do any on other type of machine.

*80 tons pressure  
Table 20"x36"*

Also three smaller sizes



Type BB

## A Surface Grinder

that is a revelation in quiet, efficient work. Powerful, rigid, and sensitive in action. Equipped with all modern attachments.



**JARECKI MACHINE  
AND TOOL CO.**

Department A

GRAND RAPIDS,

MICHIGAN

# KRW Hydraulic and Sensitive ARBOR PRESS

**Gives All - Around  
Efficiency at very  
Low Cost**

**T**HE latest improved combination KRW Hydraulic and Sensitive Arbor Press includes many improvements not found in any other press, at any price.

## **35 TONS CAPACITY**

Hydraulic pressure easily operated by one hand controls movement of ram to one-thousandth of an inch movement. Automatic air vent and pinion brake holds ram at any height when not in use.

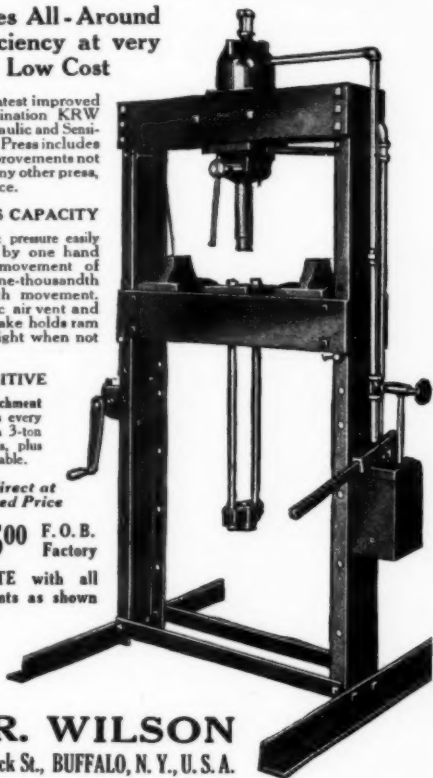
## **SENSITIVE**

Press Attachment incorporates every feature of a 3-ton bench press, plus adjustable table.

*Sold direct at  
Reduced Price*

**\$115<sup>00</sup>** F. O. B.  
Factory

**COMPLETE** with all  
Attachments as shown



## **K. R. WILSON**

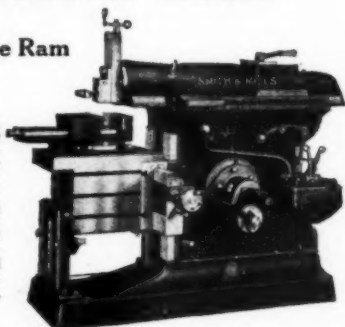
**10-14 Lock St., BUFFALO, N. Y., U. S. A.**

K. R. Wilson Shop Equipment Sales Co., Los Angeles, California  
Export Department: 126 Liberty St., New York City

# SHAPERS

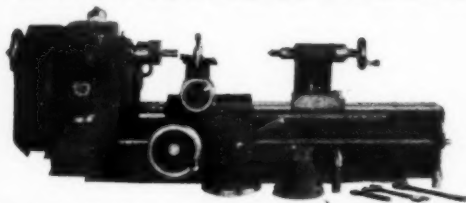
## "V" Type Ram

12", 14", 16",  
20", 25" Gear  
Box single pul-  
ley or motor  
drive, also 16",  
20", 25" B. G.  
cone drive with  
belt shifter. 32"  
B. G. all geared  
single pulley or  
motor drive, all  
sizes crank type.



The Smith & Mills Co., Cincinnati, O., U.S.A.

## 9" A. V. Carroll Geared Head Lathe



A 9" Geared Head Lathe for manufacturing plants, tool rooms, industrial plants, schools, service stations, homes and jobbing shops.

All steel gears, three changes in head and gear box.  $\frac{1}{4}$  H. P. motor direct connected. Cuts right or left hand threads. Furnished also with three step cone belt drive.

*Circular on request*

**A. V. Carroll Machine Tool Co.**  
Norwood, Cincinnati, Ohio

# **12 SPINDLE SPEEDS**

**Chrome Nickel Steel Gears**



**C. & J. 15/16-inch  
Geared Head  
Motor Drive Lathe**

**ASK FOR FURTHER DETAILS**

**Carroll & Jamieson Machine Tool Co.  
Batavia, Ohio**

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## **The NEW HAMILTON**



### **LATHES**

are unsurpassed for strength and accuracy. Most convenient heavy duty quick change gear lathes for production and tool room use.

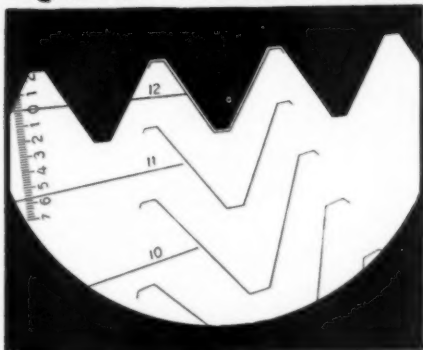
Single and double back gear with cone drive. Geared head with belt and motor drive.

**Sizes 16'-18'-20'-22' and 24'**

*Send for new catalogue bulletin*

**The Hamilton Tool Co., Hamilton, Ohio**

## Optical Thread Measuring



will detect errors visibly, without guessing, independent of feel or contact.

Write for catalog on ZEISS Toolmaker's Microscope

**GEORGE SCHERR CO., 142 Liberty St., NEW YORK**

*Order the Handnib on a 10-day trial basis*

### Cut Trial Blanks or Any Irregular Shape With the HANDNIB

**Save 90%**

This new portable nibbling tool can cut sheet metal into any shape in one-tenth the time required for the same work by various other methods.



**National Machine Tool Co.**  
1536B Clark St., Racine, Wis.

# Universal Joints

*In Steel and Bronze*



*Send for Special Circular giving specifications  
and prices on complete line*

## BOSTON GEARS

BOSTON GEAR WORKS SALES CO.

Norfolk Downs, Quincy, Mass.

BOSTON NEW YORK PHILADELPHIA CLEVELAND CHICAGO

## For Economy in Precision Boring



Flynn  
Micrometer  
Off-Set  
Boring Heads

A mechanically-perfect precision head of simple design and few parts.

All parts of heat-treated nickel steel.

This compact head has the least overhang of any head on the market, yielding utmost rigidity, and maximum table travel.

*Made in a full range of sizes to fit all standard spindles  
and arbors. Send for descriptive bulletin and price list.*

**J. M. WATERSTON,** 426 Woodward Ave.,  
DETROIT, MICH.

# GEARS

**All Kinds—Small**



The most accurate made and prices reasonable. We carry a complete line of gears in stock for immediate shipment. Can also quote on special gears of all kinds. Send us your inquiries.

*Write for Catalogue No. 70*

**CHICAGO STOCK GEAR WORKS**  
105 South Jefferson Street, Chicago, Ill.

# MIKRON



**AUTOMATIC  
SMALL PRECISION**

**Gear Hobbers  
Gear Cutters  
Pinion Hobbers  
Thread Millers  
Hob Grinders**

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50 Church St., New York City



# Mass. Gears

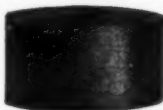
**ALL  
TYPES**



**ANY  
MATERIAL**

**Medium and Small Size Gears**

**MASSACHUSETTS GEAR & TOOL CO.**  
36 Nashua St., Woburn, Mass.



## Punch **MORE** Holes *with* **T. H. L. PUNCHES**

T. H. L. Punches will produce more than the average number of holes, for they are made of the highest grade, dependable tool steel and are hardened and tempered—*right*. Our experience of over 35 years in making of punches assures you satisfactory, continuous and profitable production.

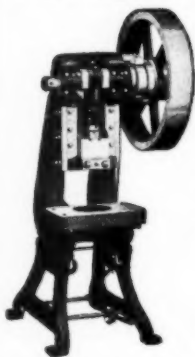
### **A Trial Order**

will convince you. We carry large stocks of regular sizes for immediate delivery—special sizes quickly made.

*Write for a copy of our catalog*

**T. H. Lewthwaite Machine Co.**  
311 East 47th St., (Est. 1890) New York City

## The Spirit Of the Times



is reflected in the speed and stamina of Rockford High Duty Punch Presses.

They are built to produce and maintain Hi-Production—and they do it.

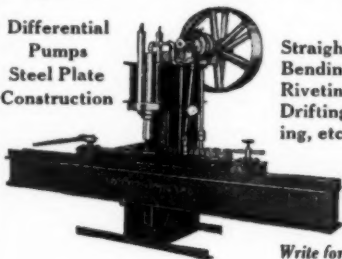
Wide range of sizes and types.

*Write today for new catalog*

**Rockford Iron Works**  
Rockford, Ill.

## Lourie Hydraulic Open Throat Presses

Differential  
Pumps  
Steel Plate  
Construction



for  
Straightening,  
Bending, Forming,  
Riveting, Forcing,  
Drifting, Broach-  
ing, etc.

All types of presses  
For all classes  
of work

*Write for Bulletin 2302*

**Lourie Manufacturing Co.,** 565 Washington  
Blvd., Chicago



## Atlas Arbor Presses

**For All Forcing Operations**

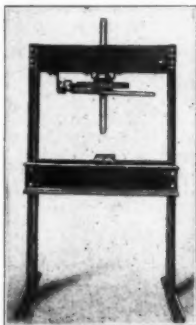
Illustration shows our No. 55 Power Drive Press, which is adaptable for fast production work and capable of supplying ten tons pressure.

*Write for our Bulletin—  
showing 30 different sizes*

**Atlas Press Co.**

*Department B,  
Kalamazoo, Michigan*

## Fall River Screw Press



Here is a new screw press which is large enough and strong enough to take care of every job that comes into the average shop. It is built of high grade steel throughout, with special attention given to those parts subject to the hardest strain. 42 inches wide and table is 8 inches. Capable of exerting over 65 tons pressure.

*Write for further information*

**Fall River Grinding & Machine Co.**  
**JESSE ST., FALL RIVER, MASS.**



## Speed and Finish

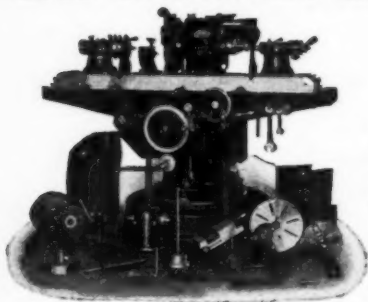
The PORTER-CABLE BELT GRINDER is faster than a wheel and leaves a better finish than a disc.

Combined horizontal and vertical models in 6" and 10" belt sizes.

*Write us*

**PORTER-CABLE  
MACHINE CO  
SYRACUSE, N.Y.**

## SIX Grinders In ONE



**12"x36"  
Thompson  
Universal  
Grinder**

Does every grinding operation required in the machine shop. Lowest cost work for plain, surface, die, cutter, edge and internal grinding. Equipped with the new auxilliary coarse cross feed for surface grinding.

*Let us send you the Illustrated Booklet today!*

**The Thompson Grinder Company**  
1534 West Main St., 1-1 Springfield, Ohio

# **BURKE** Low Cost Milling



No. 4, \$220

Here is one of a line of five Burke Millers that range from \$125 to \$220 in price. Gratifyingly low cost, in this era of high-priced equipment — and you'd be surprised at the quantity and quality of work they turn out. There's no need to pay more!

*Write us for circulars*

**The Burke Machine Tool Co.,** 297 E. 16th St.,  
Conneaut, Ohio



**For Easy Handling  
Speed and Precision**

## **DETROIT**

**Semi-Automatic  
Five Spindle**

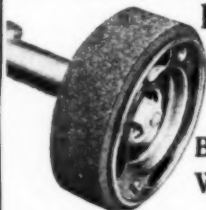
**DRILLING MACHINE**

Designed for highest efficiency, the Detroit drills from 900 to 1200 holes per hour—as fast as the operator can feed it stock. Fixtures are easily operated, a pull on the lever locks or unlocks them instantly. For speed, accuracy, simplicity and low cost of operation the Detroit cannot be equaled. Capacity, No. 60 to  $\frac{3}{8}$ " drills.

*Write for Illustrated Folder*

**Detroit Machine Tool Co.**  
5061 Woodward Ave., **Detroit, Mich.**

## The Speediest, Most Economical Buffing Tool Made



*The*  
**Quick-As-Wink**

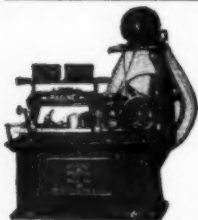
**BUFFING  
WHEEL**

Reduces Buffing  
Costs by  
**50%**

A remarkable buffing system at half the cost of rag-buffs. Absolutely safe at high speeds. Abrasive strips attached in 30 seconds. Gives 100% buffing surface. Wheels accurately balanced. Tested at 8,000 R. P. Ms. Thoroughly guaranteed. Used by hundreds of plants throughout the country.

*Send for Complete Details*

**C. B. HUNT & SON . Salem, Ohio**



High Speed 6 in. x 8 in. Machine  
Silent Chain Motor Drive  
Other Machines 4 in. to 12 in. cap.

## Racine Saws are Preferred

A list of users of Racine Metal Cutting Machines would read like a "Who's Who" of American industry.

This preference for Racine Equipment is the result of sheer performance established by twenty years experience with metal cutting. There is a Racine Machine for every metal cutting job.

*Write*

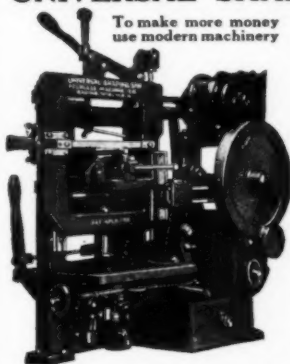
**Racine Tool & Machine Co.**

**1429 Junction Ave., Racine, Wis.**

# RACINE

**HIGH-SPEED  
METAL CUTTING MACHINES**

## -PEERLESS- UNIVERSAL SHAPING SAW



To make more money  
use modern machinery

**Different Principles  
Greater Efficiency  
Give The Most Of—  
Speed  
Accuracy  
Blade Economy**

**SIZES:**

**6"x6"--9"x9"--13"x13"**

**PEERLESS**

**HIGH SPEED HACK-SAWS**

**6"x6" 9"x9" 13"x16"**

**Sturdy--Efficient--Reliable**

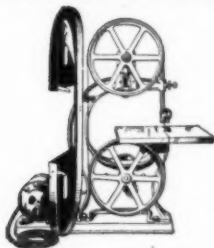
**Peerless Machine Co.**

**1218 Sixteenth St.**

**Racine, Wisconsin**

*Write for Details*

## S. & B. 12" WONDER BAND SAW



**Semi Steel Frame 12x14,**

**45° Tilt Top Table**

**V belt and pulleys**

**\$35<sup>00</sup>**

*Without motor, base and guard*

A bandsaw fully the equal of high priced machines. Cuts wood or metal with the same ease. Used by large contractors everywhere—Building, roofing and flooring.

Recommended by Kaucher Engineering Co. Chicago, Ill. Large Flooring Contractors working on patent flooring composed of wood and steel splines.

Free Book of Projects with each purchase.

**Representatives and Dealers  
Wanted Everywhere**

*Write for full descriptive circular*

**Complete—\$60.00**

**15 Days**

**Free Approval**

**Money Back Guarantee**

**Scott-Bansbach Machinery Co.**

**130-E South Clinton Street,**

**Chicago, Ill.**



## The **KELLERFLEX**

A Flexible Shaft Machine of a Hundred Uses.

$\frac{1}{4}$  —  $\frac{1}{3}$  —  $\frac{1}{2}$  — H. P.  
Speeds Up To 10,500 R. P. M.

Non-Heating Shafts  
Ball Bearing Handpieces

**FILING— GRINDING—  
POLISHING—DRILLING—  
ETC.**

*Tell us your problems*

**KME**

Keller Mech. Engineering Corp.,  
58A Washington St., Brooklyn, N. Y.

## **Mall "Jack of All Trades"**

*and*

## **Masters Them Too**



**Cleaning  
Scraping  
Filing  
Sanding  
Polishing  
Grinding  
Sawing  
Finishing**

**Mall Tools are  
powerful tools**

*Write for Catalog*

**Mall Tool Company,** 7730 So. Chicago Ave.,  
Chicago, Illinois





**Hack  
Saws**

## **VICTOR High Speed Steel Hack Saw Blades**

These new Victor Blades have so completely answered every possible cutting requirement in machine

shops throughout the country, that mechanics are pushing VICTOR by their increasing demand for these blades.

VICTOR HIGH SPEED STEEL HACK SAW BLADES when used for power work, will exceed your highest expectations for fast cutting and enduring qualities. They are head and shoulders above the field by comparison.

*Write us about your cutting problems*

**VICTOR SAW WORKS, Inc., Middletown, N. Y.**

# **HILL - CURTIS**



**ELECTRIC**

**Grinders — Polishers**

**BELT DRIVEN**

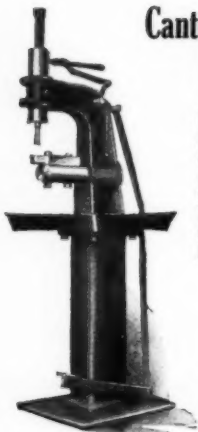
**Grinders — Polishers**

**ALL SIZES**

**Bench and Floor Types**

**Timken Roller Bearings  
Ball Bearings**

**Hill - Curtis Co., 1614 Douglas Avenue,  
KALAMAZOO, MICH.**



## Canton Pedestal and Bench Pneumatic Riveters

Perhaps you have small tubular pieces to which you rivet small parts, and would like to insert the rivets from the outside and head them on the inside. Canton Riveters are handling such work in less than half the time required to insert the rivets from the inside.

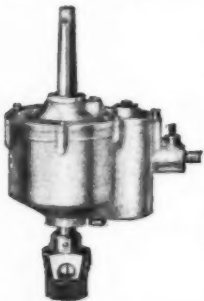
**Let us work out your  
riveting problems.**

*We also build a complete line of  
Chipping and Calking Hammers*

**Canton Pneumatic Co.**

1720-9th St., S. W., Canton, Ohio

## IF YOU TAP HOLES—



Why not have the feel of the tap right at your finger tips? A tap is a delicate tool. The Ettco Tapping Attachment taps delicately—with increased speed—That's the answer.

### THE ETTCO Tapping Attachment

is simple—nothing to adjust—if the tap sticks or hits bottom the Ettco slips—the same action coming out. No clash of a positive clutch—just the smooth action of the patented leather lined cone clutch.

**Sensitive—speedy—satisfactory.**

No. 1—Tapping Attachment	$\frac{3}{16}$ " in steel, $\frac{1}{4}$ " in C. I.	\$35.00
No. 2—Tapping Attachment	$\frac{7}{16}$ " in steel, $\frac{3}{8}$ " in C. I.	50.00
No. 3—Tapping Attachment	$\frac{1}{2}$ " in steel, $\frac{5}{8}$ " in C. I.	80.00

**Eastern Tube & Tool Co., Inc.,** 600 Johnson Ave.,  
BROOKLYN, N. Y.

## Grant Noiseless Rotary Rivet Spinner



One rivet per second.  
Heads highly polished.  
No hammer or tool marks.  
The work is always uniform.  
As tight or loose as desired.  
Works in hard-to-get-at places.  
It's easily operated by cheap help.  
A boy or girl can manipulate it.  
And—it's noiseless in operation.

Write today for Catalog, showing several styles. Also send us samples of your work for riveting; we will return them with close estimate of cost.

**The Grant Mfg. & Machine Co.**  
C. E. Station, Bridgeport, Conn.

## Vanderbeek Universal Joints



—represent the practical refinements of 25 years experience in manufacturing Universal Joints. All parts are generous sized, fully protected against dirt, and are practically self-oiling. Exceptionally strong, they transmit full power up to 70°.

Vanderbeek Joints are in daily use on thousands of machines.

*Write today for our  
Descriptive Catalog.*

**American Tool Works, Inc.**  
Hartford, Conn., U. S. A.



# WHY NOT TRIED

It Remains With You. It's A  
**KEYSEATER**

Can Be Used Anywhere

*Don't Delay Catalog O*

**National Machine Tool Co.**

2268 Spring Grove Ave.,

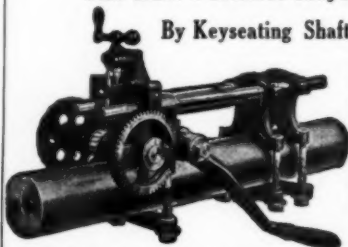
Cincinnati, O.



## **"Burr" Simplifies Keyseating**

**The Burr Portable Keyseater**

**By Keyseating Shafting in Place**



Does away with the expense of dismantling shafting and tearing down equipment for keyseating. Working from any position, it cuts perfect keyways up to 12" long in shafts up to 5" in diameter.

*Figure the Saving!*

Better have one on hand for your next shafting job. 10,000 users have saved dismantling expenses by using a "Burr." Will you be next?

**JOHN T. BURR & SON**

422 Kent Ave., Brooklyn, N. Y.

# Etchograph

Trade Mark



Patented July 8, 1918  
Patent No. 1,309,160

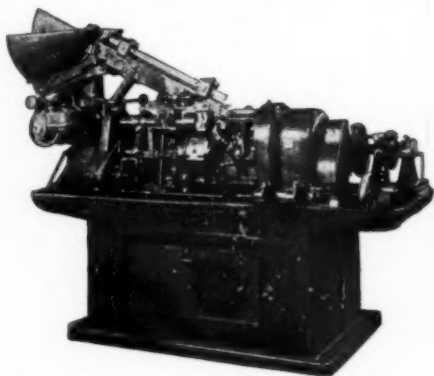
## Time Saving

Using the original ETCHOGRAPH enables you to mark your tools or parts in *one-fifth* the time other methods require. No acids—no fuss—write as if with a pencil. Six stages of heat give you six variations in the size of marking—an advantage no other machine can offer.

*Write for complete details, stating power available*

**William Brewster Company**  
50 Church St., New York

# Combined Automatic Pointing and Threading Machines

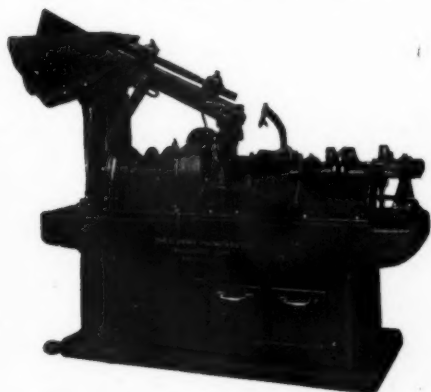


For Bolts and Cap Screws  
Capacity— $\frac{3}{16}$ " x 1" Diameter  
1" to 6" Long

*Write for Full*

**THE ECONOMY ENGINEERING**

# Automatic Shaving Machines



Shaves top and underneath  
head of Cap Screws  
Capacity  $\frac{1}{4}$ " x  $\frac{3}{4}$ " Diameter  
 $\frac{3}{4}$ " to  $5\frac{1}{2}$ " Long

*Information*

Full  
G COMPANY, - Willoughby, Ohio



*Guaranteed  
fool-proof  
and durable.*

*Used on A. C.  
light circuit.*



View of Etching Pencil  
Marking and Demagnetizing  
in same operation.

## **Luma Combination Electric Etching and Demagnetizing Instrument**

*Easy to use as a lead pencil*

A time and labor saving tool that functions equally well permanently marking expensive high speed steel tools and demagnetizing large or small ones.

*Always instantly ready without fuss or muss*

Operation symbols plainly and permanently marked on tools saves time and spoiled work and speeds production.

### **Luma Electric Equipment Co.**

P. O. Box No. 132 Main Office,

Dept. H.

TOLEDO, OHIO







## Drilling Cost Cut 76%

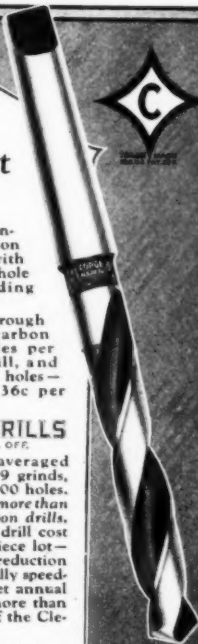
A MIDWEST lamp manufacturer, using carbon drills, was confronted with the problem of reducing hole production cost and speeding up hole production.

On a certain job, run through in 10,000-piece lots, carbon drills averaged 780 holes per grind, 24 grinds per drill, and total drill life of 20,000 holes—with direct drill cost of 36c per 10,000 piece lot.

### CLE-FORGE HIGH SPEED DRILLS TRADE MARK REG. U.S. PAT. OFF.

were then tried. They averaged 10,000 holes per grind, 19 grinds, and total drill life of 200,000 holes. Although costing, per drill, more than twice as much as the carbon drills, Cle-Forge showed a direct drill cost of only 8½c per 10,000 piece lot—demonstrating a net cost reduction of over 76%, while materially speeding up production. The net annual saving was \$381.06—or more than 2½ times the actual cost of the Cle-Forge Drills used!

*This complete story is told  
in Digest No. 59. Shall  
we send you a copy—  
without obligation?*



The

**CLEVELAND**  
CLEVELAND

**TWIST DRILL  
COMPANY  
CLEVELAND**  
NEW YORK CHICAGO DENVER  
LOS ANGELES

# **LEBLOND**

**BUILDERS OF**  
**"MASTER TOOLS OF INDUSTRY"**

**Obsolete Tools  
Bring Profit Starvation**

*Get the facts  
on*

**LEBLOND**  
**Modern Equipment**

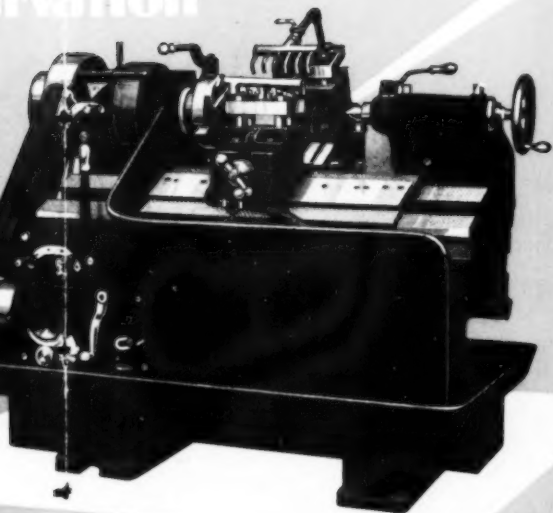
*The R.K. LeBlond  
Machine Tool Co.*

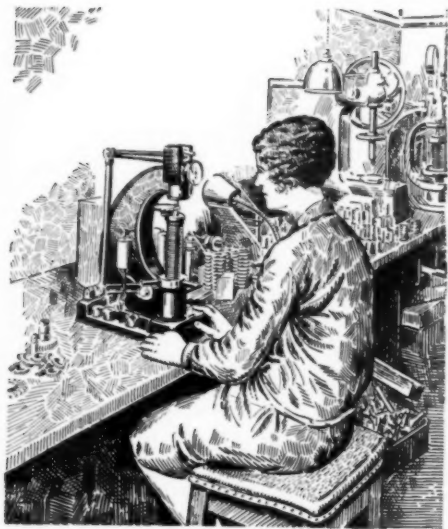
*Edwards & Madison Rds.  
Cincinnati, Ohio*



**ND**  
**USTRY"**

**S**  
**rvation**





# *The* **ROCKWELL Hardness Tester**

England during the last year or two has been making rapid strides in re-equipping her shops—especially along proven American lines.

Naturally that has included the Rockwell Tester and hundreds of Rockwells are now used in England. Scores of plants there have ordered second and third Rockwells.

**WILSON-MAEULEN & CO**  
INCORPORATED

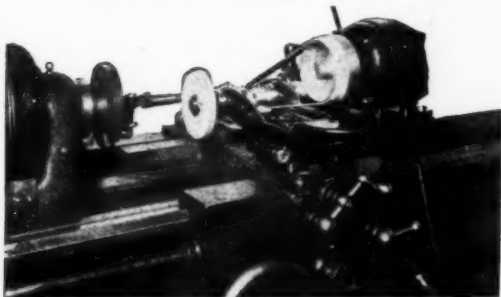
735 East 143rd Street,

New York

# **"ATLANTIC"**

## **Precision Lathe Grinder**

**For External, Internal and Surface Grinding  
on any Lathe from 14-inch swing up**



### **"Not a Cent for Repairs"**

"We find your machine far superior to other lathe grinders. The fact that it has not cost us a single cent for repairs, or has not needed any attention in the three years we have used it, also speaks well for your machine." (Name on request).

This statement, taken from a letter of a prominent manufacturer, shows that the the "Atlantic's" claim of durability and economical operation "stands up" under actual working conditions. These characteristics, plus its accuracy, absence of chatter marks and remarkable versatility, makes the "Atlantic" your best buy. And its cost is *one-third less* than its nearest competitor.

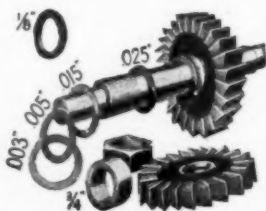
**THREE DAYS' TRIAL—NO EXPENSE TO YOU**

*Write for Illustrated Leaflet on  
"WHAT OTHERS SAY"*

**The Kern Electric & Eng. Co., Inc.**  
**1092 So. Orange St., Newark, N. J.**

# Steel Spacing Washers—

Made of a good grade of Cold Rolled Strip Steel, also known as Shim Steel



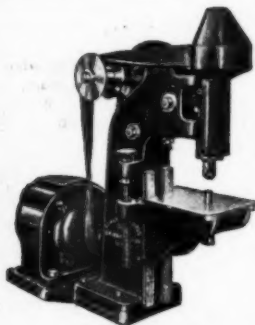
Stock sizes for arbors of following diameters:  $\frac{3}{16}$ ,  $\frac{1}{4}$ ,  $\frac{5}{16}$ ,  $\frac{3}{8}$ ,  $\frac{7}{8}$ , 1,  $1\frac{1}{8}$ ,  $1\frac{1}{4}$ ,  $1\frac{3}{8}$ ,  $1\frac{1}{2}$ ,  $1\frac{5}{8}$ ,  $1\frac{3}{4}$ , 1 $\frac{7}{8}$ , 2,  $2\frac{1}{4}$ ,  $2\frac{1}{2}$ , 3,  $3\frac{1}{2}$  and 4 in. and larger.

Stock thicknesses: .002, .003, .004, .005, .006, .007, .008, .010, .012, .015, .020, .025, .032, .047, .063, .093 and .125 inch.

Other thicknesses up to 3.000" made to order, with keyways if so ordered.

*Ask us to send samples; you'll like them*

**Detroit Stamping Company**  
3443 West Fort St., Detroit, Mich.



## For Your Small RIVETING

### The Linley Rotary RIVET SPINNER

Covers a wide field of riveting.

Simple in design but—

Rigid and powerful.

Guaranteed to give satisfaction.

Get the full details before buying  
a riveter

**WE ALSO  
MANUFACTURE**

**EQUIPMENT FOR ROTARY  
RIVET SPINNING MACHINES**

**SEND FOR DESCRIPTIVE FOLDER**

**Linley Brothers Co.,** 579 Fairfield Ave., Bridgeport, Conn.



## Has the Work Stood Still

While high priced mechanics  
dig fretfully at a broken tap?



### *The Walton Tap Extractor—*

is the tool that solves your problem. Simply insert the fingers into the flutes, twist the outer end, and the tap slides out. Made in 3 and 4-flute styles.

*Sixty days' trial will prove its value*

## **The Walton Company**

**302 Pearl St., Hartford, Conn.**



## Armstrong Tools



### **Tool Holders**

Over 100 shapes and sizes for every operation on Lathe, Planer, Shaper, Slotter, etc.—the only complete line. Better have our Tool Holder Catalog.

### **Ratchet Drills**

For all purposes—"Packer," for rough service; "Standard," for general use; "Weston," extra heavy; "Universal," and "Short Ratchet." Ask for Ratchet Drill Catalog.

### **Drop Forged Wrenches**

All kinds. All sizes. Highest quality. Write for Catalog of Steel Wrenches.

### **Clamps and Dogs**

Drop forged. All shapes and sizes. Highest quality. Alloy steel screws. Separate Catalog.

## **Armstrong Bros. Tool Co.**

"THE TOOL HOLDER PEOPLE"

**308 N. Francisco Ave., Chicago**

# MARKING DEVICES

RUBBER STAMPS



STEEL STAMPS



BURNING BRANDS



ETCHED METAL  
NAME PLATES



BRASS  
LABELS



THE SCHWERTLE STAMP CO.  
BRIDGEPORT, CONN.



## Die Making Machines

save an average of 50%

Dies, templets, experimental parts, gages and the like can be sawed, filed and lapped on the Oliver of Adrian Die Making Machine much easier, more accurately and in a fraction of the time ordinarily required for handwork.

*We also manufacture a line of*

Point Thinners.

Drillpointers.

Cutter Grinders



*Send*

*for*

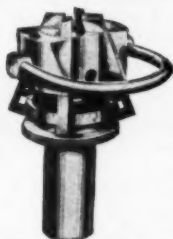
*Bulletins*

Oliver Instrument Company,

1408 Maumee St.,  
ADRIAN, MICH.

## Reisinger Quick Adjustable Hollow-Mills

Have a graduated adjusting dial — interlocking and moving blades either way to cut smaller or larger diameters.



A clamping device operated by a lever a single move of which locks or releases all blades simultaneously.

Blades are H. S. Steel

### Specifications and Prices, F. O. B. Rochester, N. Y.

No.	Cutting Capacity	Price Complete	Ext. Blades Set of Four	Diam. of Std. Shanks	Larger and taper shanks furnished at small addition. Specify diameter of shank — otherwise Std. shank will be furnished.
1	$\frac{3}{32}$ to $\frac{5}{16}$	\$14.00	\$3.00	$\frac{3}{8}$	
2	$\frac{1}{8}$ to $\frac{3}{16}$	21.00	3.80	$\frac{1}{2}$	
3	$\frac{3}{16}$ to $\frac{1}{4}$	31.50	5.00	$\frac{13}{16}$	
4	$\frac{1}{4}$ to $\frac{1}{2}$	47.75	6.60	$2\frac{1}{2}$	

Reisinger Machine Tool Corp., 837 Lake Avenue, ROCHESTER, N. Y.



## "Scully-Jones" Chucks for Economical Tapping, Drilling and Milling

### CENTER BY THE SHANK;

Insure true running tools and uniform cutting action.

### DRIVE BY THE SQUARE;

Insure positive driven tools that can't slip.

### MADE IN ONE PIECE;

Simple, compact, no adjustments necessary, nothing to get out of order.

### SAVE TOOLS AND SPEED UP PRODUCTION. CHUCKS FOR ALL SIZE TAPS, DRILLS AND CUTTER SHANKS.

Complete description in our Small Tool Catalog No. 36, listing and describing complete line of "WEAR-EVER" PRODUCTION TOOLS.

## SCULLY-JONES & COMPANY TOOL DIVISION

1901 So. Rockwell St., Chicago, Ill.

## Nicholson Expanding Mandrels



A mandrel is in reality an internal chuck. You wouldn't want to do without a lathe chuck; then why continue operating without expanding mandrels in your shop.

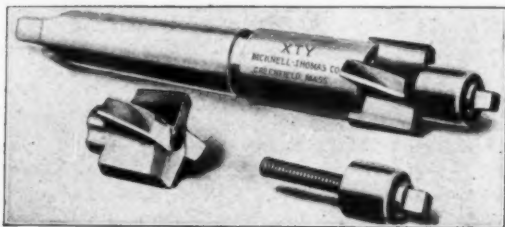
*A letter or card will bring you complete information*

**W. H. Nicholson & Co.**

117 Oregon St.,

Wilkes-Barre, Pa.

## Counterbore Cutters and Holders



All Bicknell-Thomas Counterbore, Core Drill and Flute Sheet Cutters are forged and twisted while hot, increasing original strength and density of our High Speed Steel, resulting in tools unexcelled for cutting efficiency with increased number of cuts per grind. Decided advantages of the Cutters are the shearing cut—powerful drive—less re-sharpening.

*Write for Illustrated Catalog*

**BICKNELL-THOMAS CO.,**

**Greenfield, Mass.**

## Save Cutting Oil

With the Tolhurst Chip Wringer, Cutting Oil can be reclaimed and used over and over again. There is a size to meet your needs — baskets 20", 26", 40" and 48" in diameter.

**WRITE—**

**Tolhurst Machine Works, Inc.**  
Troy, N. Y.

New York Office: 183 Madison Ave.  
Chicago Office: 8 So. Dearborn St.



**Hercules Shears and Rod Cutters** are the most powerful hand tools on the market. Made in several styles for bench and floor mounting. Capacities: Rod 1-8 to 8-4 in. diameter; sheet 1-16 to 5-16 in. thickness.

## TUCKER OIL CUPS and OIL HOLE COVERS

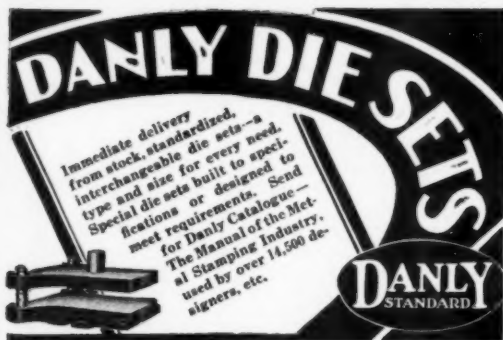
**COMPACT — DURABLE — ECONOMICAL**  
A Style and Size for Every Purpose

Easily closed by twist of fingers or self-closing. This feature means a dust- and grit-tight cup and prevents oil throwing during machine operation.

Send for Catalog No. 13 and Samples

**W. W. & C. F. TUCKER, INC.**  
612 Capitol Ave., Hartford, Conn.

**FOREIGN AGENTS:** Fenwick Freres & Co., Paris, France.  
Buck & Hickman Ltd., London, England.  
Alfred Herbert Ltd., Yokohama, Japan.



# DANLY DIESSETS

Immediate delivery from stock, standardized, interchangeable die sets--a type and size for every need. Special die sets built to specifications or designed to meet requirements. Send for Danly Catalogue--The Manual of the Metal Stamping Industry, used by over 14,500 designers, etc.

**DANLY**  
STANDARD

**Danly Machine Specialties, Inc.**  
2116 S. 52nd Avenue, Chicago

Detroit, Mich., 1549 Temple Ave.

Long Island City, N. Y., 36-12 34th St.



## AMERICAN Hollow Bored Forgings, Steel Shafts

*Specify "American" on your orders for:*

**Piston Rods**

**Rams**

**Clutch Shafts**

**Steel Pipes**

**Lathe Spindles**

**Etc., Etc.**

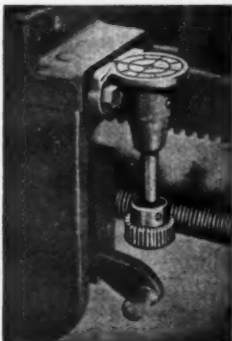
You'll not be disappointed. Good workmanship, prompt delivery and reasonable prices are guaranteed.

*Send Blueprints for Trial Order or Quotation*

**American Hollow Boring Co.**  
Erie, Penna.

## E-Z THREAD DIAL

Thread cutting on engine lathes made easy, and at lower cost. Made in four sizes. Can be easily attached to all size lathes. A reliable device that will aid the operator in the work of cutting threads. With it threads can be cut close up to shoulders as easily as the ordinary thread.



Eliminates stopping or reversing the lathe.

The many repeat orders received prove it is satisfactory after trial.

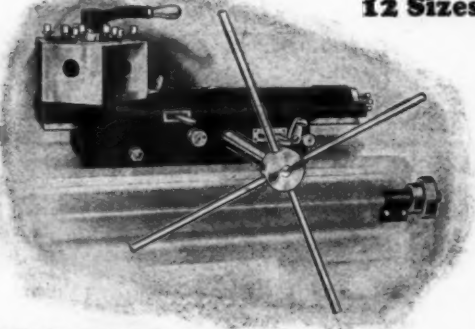
Can be shipped within two days after receipt of order.

Sent on thirty days' trial. Send for latest folder today.

**JAMES M. COLVEN, 20 Wolffe Street, Yonkers, N. Y.**

## Standardized Lathe Turrets

**12 Sizes**



**FAY & SCOTT**  
Dexter, Maine

**For any make of Lathe  
old or new**



## Arnold Hardness Tester

**A Portable Machine of Rugged Construction  
for Reliable and Speedy Testing over a  
Wide Range of Work**

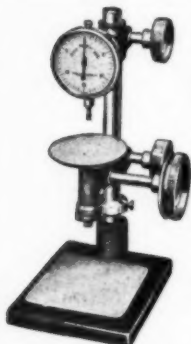
Without complicated or delicate mechanism, it is always ready for instant use.

Upkeep costs negligible. The ball is the only part subject to wear, and it can be changed in a fraction of a minute at a cost of less than one cent.

Measures hardness of raw materials in the stock room as well as finished parts, in the hands of the ordinary workman. Furnished with anvils for rounds, flats, irregular shapes and curved work.

*Worth more to you than its moderate cost  
Write for more complete information*

**H. H. ARNOLD CO., Inc., Rockland, Mass.**



## FEDERAL Bench Gauge Model 35

Table can be operated by foot, leaving both hands of operator free. Can also be used as a comparator for gauging long stock by swinging table to one side. Table is 3" in dia., base is 4" square. Post 12" high, unless otherwise specified. Equipped with the famous FEDERAL Model 60 Dial Indicator.

*Write for complete Catalog  
of the FEDERAL Line*

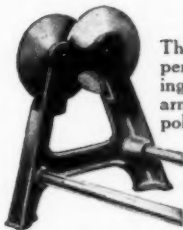
**Federal Products Corporation  
PROVIDENCE, R. I.**

Western Branch: 7338 Woodward Ave., Detroit, Mich.



# Twentieth Century Balancing Tool

*Always on the level*



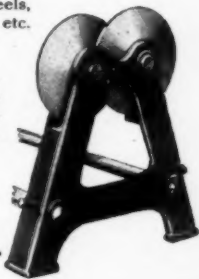
The most practical, sensitive and inexpensive device manufactured for balancing pulleys, cones, armatures, fly wheels, polishing wheels, etc.

Will set anywhere and is easily portable. In sizes

up to 24,000 pounds capacity.

*Ask for the Bulletin*

**Sundstrand Machine Tool Co.**  
Rockford, Ill.



## "STANDARD" Dial Indicator

**Simple—Sturdy**

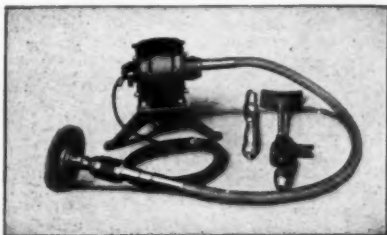
The few parts, simple construction and sturdy build enable the "Standard" Dial Indicator to excel in service. The finest gear and pinions made by a new process, insure accuracy; large figures, distinct graduation, no shadows, insure easy reading; dirt and moisture proof case insures long life. 2" and 2½" face.

*Send for Catalog showing entire "Standard" Line*

**STANDARD GAGE COMPANY, INC.**  
Poughkeepsie, New York

## The Whirlwind Buffer and Grinder

Will cut the cost on any unhandy  
grinding or polishing job



*Send for our latest bulletin*

**Stow Flexible Shaft Co.,** 3454 Ludlow St.,  
Philadelphia, Pa.  
*The Best Since 1876*

## USE "D. & W." DEMAGNETIZERS!



Of unique construction, they are simple, dependable

A rigid continuous "U" shaped core, made of the highest grade laminated electrical steel, is energized by two

stationary coils, thru which alternating current is passed. Construction is similar for d. c. machine, and in addition containing a small converter.



Have you any special problems in connection with the use of Magnetic Chucks? We will gladly investigate and report on same, or design a special chuck for your particular needs. *Write us today.*

**J. & H. Electric Co.,** 200 Richmond St.,  
Providence, R. I.

# PEERLESS

For Flat  
Work



8 Sizes

*Write for Circular*

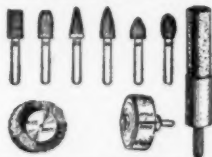
**PEERLESS SURFACING MACHINE CO., Inc.**  
**TROY, N. Y.**

## The KELLERFLEX

A Flexible Shaft Machine of a Hundred Uses.

$\frac{1}{4}$  —  $\frac{1}{3}$  —  $\frac{1}{2}$  H. P.

Speeds up to 10,500 R. P. M.



COMPLETE LINE OF ACCESSORIES

Rotary Files—  
Emery Wheels—Sanding Drums—  
Wire Brushes, Etc.

Keller Mech. Engineering Corp., **KME** 58A Washington St.  
BROOKLYN, N. Y.

## Made in 6 Sizes for Balancing Anything That Revolves up to 24000 lbs.



### Anderson Improved Balancing Ways

Require no leveling or adjustment. They are especially sensitive! Spindles and discs are hardened like the frame—they cannot lose their effectiveness or become injured by use.

"Swing"	20"	40"	60"	72"	96"	72"
Greatest distance bet. standards	20"	30"	30"	66"	88"	20'
Capacity in lbs.	1000	2000	2000	5000	10000	24000
Approx. shipping weight	45	90	150	350	650	
Code	Bed	Bed	Bed	Bed	Bed	

*Any of above can be furnished with longer shafts*

**Anderson Bros. Mfg. Co.**  
1915 Kishwaukee St., Rockford, Ill.

## The Springfield Straightening Press

"The Acme  
of  
Convenience"



Made in  
3 Sizes

Invaluable  
in the  
tool room,  
also for  
straightening  
crank and  
cam shafts  
and other  
automobile  
parts.

A GREAT LABOR SAVER, as you will find the arrangement of this Press makes it the very *acme of convenience*. Any work within the range of centers may be tested and straightened without unnecessary walking from press to lathe each time in straightening rough or finished work. Any length, however, may be operated upon. Of "Springfield Quality" thruout.

*Write for folder illustrating many of its uses*

**The Springfield Machine Tool Company**  
633 West Southern Avenue, SPRINGFIELD, OHIO  
We also manufacture Engine Lathes and Shapers

# "PROCUNIER"



**SAFETY TAPPING ATTACHMENT** with the "Procunier" Safety Friction and "Double-Jaw" tap holder gives *greater accuracy less tap breakage*, and more tapped holes to the dollar.

**All Hardened Gears**

**Special Hardened and Treated Clutches**

**Balanced Reversing Mechanism**

With the "Procunier" Safety Friction Device blind holes can be tapped just as easily as through holes, and without danger of breakage. Don't hesitate to ask for a free trial.

*Catalogue 102-B gives complete details of "PROCUNIER" Tapping Devices, Quick Change Chucks, Stud Setters and Bench Tapping Machines.*

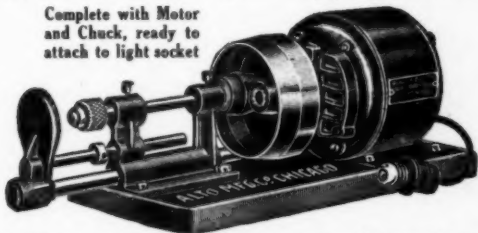
## **Procunier Safety Chuck Co.**

**14 So. Clinton St.,**

**CHICAGO, ILL.**

## **No. 1 ALTO Motor Driven High Speed Tapping Machine**

Complete with Motor and Chuck, ready to attach to light socket



The ALTO No. 1 is a simple but compact Tapping Machine. Entirely self-contained, it operates from any handy light socket. It will tap forward at the rate of 1450 r. p. m. and reverses *three times as fast*—at the rate of 5000 r. p. m. Has a capacity of  $\frac{3}{16}$ " in brass and  $\frac{3}{32}$ " in steel. The low price enables it to pay for itself. We also make other sizes of Tapping Machines.

*Write for descriptive matter and price*

**The Alto Mfg. Co., 1647-51 Wolfram St.**  
**CHICAGO, ILL.**

## Sigourney Sensitive Drills

Plain or Ball Bearing  
Belt or Motor Drive

WE MANUFACTURE sensitive drills exclusively. They are built for *service*, and in quality are unsurpassed.

SIGOURNEY DRILLS are made with one to four spindles. The illustration shows our one-spindle ball bearing drill. It has vertical adjusting head, adjustable table, three speeds, runs true and is very sensitive. *All parts are interchangeable.* Shipped belted ready for use.

*Write for circulars and prices*

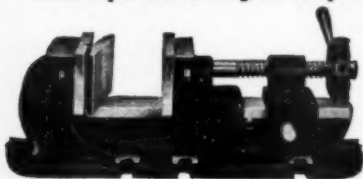
**Sigourney Tool Co.**

Hartford, Conn., U. S. A.



## Gem Drill Press Vise

Holds tapered and irregular shaped pieces firmly



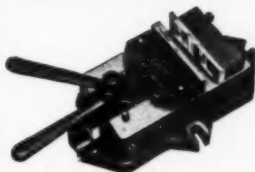
Made in  
three  
sizes  
up to  
10½ in.

ITS STRENGTH, capacity, adaptability and quickness of setting make it *the most efficient vise on the market.* Swivel jaw adjusts automatically to odd shaped pieces. Adapted to an unusual variety of drilling and milling operations. A big time saver. Worth more than it costs.

*Write for folder, illustrating some of its many uses.*

**J. E. Martin Tool & Die Works,** 528 W. State St.  
Springfield, O.

## The Most POWERFUL Vise Made Hartford Milling Vise



Jaw width ..... 5"  
Jaw depth ..... 1¼"  
Maximum opening ..... 3½"  
Weight ..... 40 lbs.

Also made in the swivel-jaw type with hard or soft jaws, maximum opening 2¼".

The "Hartford" is designed to give the utmost in service. A lower cam-faced handle gives required quick opening and return—while a top eccentric lever-handle furnishes tremendous binding power. You can rely on "Hartford" to survive the hardest usage. Its steel parts are drop forged, hardened and ground—its base is made of special iron.

*Send for descriptive catalog illustrating its usefulness*

We also Build Machinery on a Contract Basis and Design and Develop Special Automatic Machinery—Gears Cut to Order.

**Hartford Special Machinery Co.,** 285 Homestead Ave., HARTFORD, CONN.

## Hi-Speed Drills

One of the latest developments in advanced drill equipment is the "Buffalo" 12-inch Hi-Speed Drill, tested at 12,000 R. P. M.

An unusual feature is the self-adjusting rack and pinion. Four spindle speeds, 3,600 to 10,000 are easily obtained by means of a lever and rapid acting screw. Fully equipped with 8 sets S K F ball bearings.

*Bulletins sent on request*

**Buffalo Forge Co.**

161 Mortimer St., Buffalo, N. Y.

*In Canada: Canadian Blower & Forge Co., Ltd. Kitchener, Ont.*

*"Buffalo"*

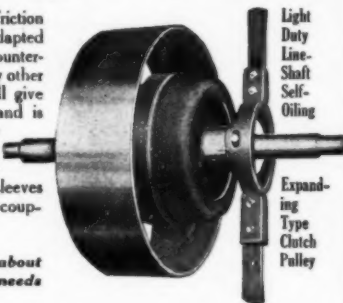
Pulley or Motor Drive



## Edgemont Type B Friction Clutch

The Type B Friction Clutch is well adapted for line-shaft, counter-shaft and many other drives. It will give good service and is simple and easy to operate. Made in pulleys, extended sleeves and cut-off couplings.

*Write us now about your clutch needs*



**Edgemont Machine Co., Inc., DAYTON OHIO**

## Something to Move? —



Heavy? Awkward?  
Hard to Get At?  
That's when you need—and appreciate—the

**"CANTON" Portable Crane, Hoist and Truck**

It will reach into otherwise inaccessible places, pick up any bulky, unwieldy object weighing up to 6000 lbs. with ease, and transport it from one end of the shop to the other. *One man* can operate it—no need to call 6 to 10 men from their work to risk torn ligaments. Safety Friction Load Brake can be added to new or old 'Cantons' at small extra cost.

*The several sizes are shown in Booklet E-8*

**CANTON FOUNDRY & MACHINE CO., Canton, Ohio**

New York Office: 101 West 31st Street





## A BIG Saving— In Your Drilling Costs

A U.S. Multiple Spindle Drill Head transforms a single-spindle drill into a multiple spindle.

YOU CAN drill two or more holes with the same speeds and feeds you use for drilling one.

### *Special Heads Made to Order*

THEY ALL have patented double adjustment, which permits drilling in any pattern. *Writing us incurs no obligation.*

**The United States Drill Head Co.,** 1952 W. Sixth St., CINCINNATI, O.

Michigan Agents—National Sales Engineering Corp., Detroit, Mich.

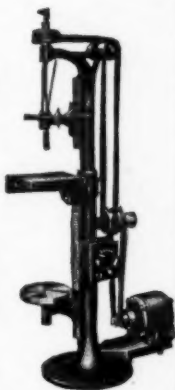
## The U. S. — A Complete Motor-Driven 14" Sensitive Floor Drill

Price with motor,  
switch and belts - **\$115**

Or with Counter-  
shaft for Belt Drive **\$70**

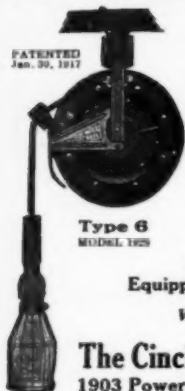
**Nothing Better** for the quick and accurate drilling of holes  $\frac{1}{2}$ " and smaller. Steel spindle, ground to size, with ball thrust bearing; vertical adjustment to head; tables for long and short work; three speeds, etc. Send us your order, or ask for more data.

**The U. S. Machine Tool Co.**  
1952 W. 6th St., Cincinnati, Ohio



# A SHINING LIGHT

PATENTED  
Jan. 30, 1917



**Type 6**  
MODEL 1925

## That Reaches Anywhere AUTEX Extension Reel

Here is a light that is not tied down—it goes wherever you need it. Brightens up the darkest corner or that almost inaccessible nook. Saves eye strain, prevents fatigue, speeds up production and so speedily pays for itself. Indispensable in Machine Shops, Service Stations and Industrial Plants of all kinds.

*Try the AUTEX in Your Plant*

Approved by the Underwriters  
Equipped with Rubber Covered Cord

*Write for descriptive circular*

**The Cincinnati Specialty Mfg. Co., Inc.**  
1903 Powers St., Cincinnati, Ohio

**Tight Joints**  
*that*  
**Swivel**



*Sample  
on  
Approval*

**Quick-As-Wink**  
**Industrial Hose Couplings**

These bronze couplings swivel freely but NEVER LEAK and can't be put out of commission. Just push together Quick-As-Wink, that's all! Can not become disconnected accidentally. Guaranteed for one year. Made in sizes from 1/8" to 4". Get descriptive bulletin and prices.

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## SEVERAL STOOLS IN ONE

Adjust this Bridgebilt stool to suit your tallest or your shortest worker. No need to provide special equipment for each.

Bridgebilt factory seating is famous for its strength and long life, its neat appearance, and the comfort that goes with adjustability.

*Clip the coupon and send to us on your letterhead*



### FREE TRIAL

- ☐ Send me Bridgebilt Adjustable Stool for a month's Free Trial
- ☐ Send me Free Bridgebilt Catalog

**The Chicago Wire Chair Co.**  
616 No. LaSalle St., Chicago, Ill.  
Eastern Office: 119 E. 27th St., New York City

## In Reducing Costs-Every Little Bit Helps



### You'll Find the HANDIEST RACKS

able to do their "bit" well. They save time and money by keeping stock piled neatly according to size, either alongside the operator or in a handy storage place. No time lost digging through piles of different lengths —no time out for a walk to a distant storeroom. Save space for they can be placed back to back as in picture, or singly against a wall, or staggered back-to-back where every half-inch counts.

*Order a Set Today—We Ship on FREE Trial*

**Wm. S. Yohe Supply Co.**

503 Mahoning Road, N. E.,

Canton, Ohio

## Repay Cost 5 Times a Year

Let us tell you about the BIG  
Profits in TOWSLEY Trucks



Many Sizes and Styles  
from \$10 up.

Efficiency  
EXPERTS  
say that

### TOWSLEY TRUCKS

repay their  
cost every  
two to three  
months.

Every style  
for every  
need.

*Write us for details of the BIG truck profits today!*

**John T. Towsley Mfg. Co., Cincinnati,  
Ohio, U. S. A.**

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## PIONEER TRUCK CASTERS



are Dependable — Efficient  
and most Economical.

A size and style for every pur-  
pose—Ball Bearing, Steel Roller  
Bearing—Double Wheel and Rigid type patterns.

*Complete illustrated catalog on request*

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709-715 Taylor Street,

**ELKHART,**

**INDIANA**

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- Arbors, Solid**  
Nicholson & Co., W. H., Wilkes-Barre, Pa.
- Auto-Gages For Dies**  
Danly Machine Specialties, Inc., 2116 So. 52nd Ave., Chicago
- Automatics**  
New Britain Machine Co., New Britain, Conn.
- Balancing Ways**  
Anderson Bros. Mfg. Co., Rockford, Ill.  
Sundstrand Machine Tool Co., Rockford, Ill.
- Balls, Bearing and Burnishing**  
Abbott Ball Co., Hartford, Conn.
- Band Saw Machines, for Metal**  
Armstrong-Blum Mfg. Co., 341 N. Francisco Ave., Chicago
- Bar Cutters**  
Buffalo Forge Co., Buffalo, N. Y.
- Barrels, Tumbling**  
Abbott Ball Co., Hartford, Conn.  
Scully-Jones & Co., 1901 So. Rockwell St., Chicago
- Bench Legs, Steel**  
New Britain Mch. Co., New Britain, Conn.
- Bending Machines, Hand and Power**  
Armstrong-Blum Mfg. Co., 341 N. Francisco Ave., Chicago
- Boring Bars**  
Buffalo Forge Co., Buffalo, N. Y.  
Excelsior Tool & Mch. Co., E. St. Louis, Ill.  
Hendley & Whittemore Co., Beloit, Wis.  
Lenthwaite Mch. Co., T. H. 311 E. 47th, N. Y.  
Lourie Mfg. Co., 565 Washington, Chicago  
Fedrick Tool & Machine Co., Philadelphia
- Boring Bars, Cylinder**  
Fedrick Tool & Machine Co., Philadelphia
- Boring, Drilling & Milling Machines**  
Ineffance Machine Co., Defiance, O.
- Boring and Drilling Mches., Vertical**  
Raker Brothers, Inc., Toledo, Ohio
- Boring and Turning Machines, Vertical**  
Cincinnati Planer Co., Cincinnati, Ohio
- Boring Heads**  
Waterston J. M., Detroit, Mich.
- Boring Machines, Horizontal**  
Avery Drilling Machine Co., Cincinnati  
Lambert Mch. & Engin'g Co., Cleveland, O.  
Fedrick Tool & Machine Co., Philadelphia
- Boring Tools**  
The Co-Operative Mch. Co., Cleveland, O.  
Ricker-Shafer Co., Erie, Pa.
- Brands, Burning**  
Schwerdtle Stamp Co., Bridgeport, Conn.
- Buffing Wheels**  
Hunt & Son, C. B., Salem, Ohio
- Bulldozers, Hydraulic**  
Lourie Mfg. Co., 565 Washington, Chicago
- Burnishing Equipment, Ball**  
Abbott Ball Co., Elmwood, Conn.
- Bushings, Drill Jig**  
Ex-Cell-O Tool & Mfg. Co., Detroit, Mich.
- Bushing Finishing Machines.**  
Economy Engineering Co., Willoughby, O.
- Calipers, Vernier**  
Scherr Co., Geo., 144 Liberty St., New York
- Casters, Truck**  
Pioneer Caster & Mfg. Co., Elkhart, Ind.
- Centering Machines**  
Sundstrand Machine Tool Co., Rockford, Ill.
- Chamfering Machines, Automatic**  
Grant Mfg. & Mch. Co., Bridgeport, Conn.
- Chaser Grinders**  
National Acme Co., Cleveland, Ohio
- Chucking Machines**  
New Britain Mch. Co., New Britain, Conn.  
Springfield Machine Tool Co., Springfield, O.  
Sevens Inc., John B., 27 Cleveland Place, New York
- Chucks, Automatic and Quick Change**  
Procon Safety Chuck Co., 18 S. Clinton St., Chicago
- Chucks, Collet**  
Hardinge Brothers, Inc., 1770 Barton Ave., Chicago
- Chucks, Drill**  
Procon Safety Chuck Co., 18 S. Clinton St., Chicago
- Chucks, Drill and Tap**  
Eastern Tube & Tool Co., Inc., 680 Johnson Ave., Brooklyn, N. Y.  
Hartford Special Mch. Co., Hartford, Conn.  
Scully-Jones & Co., 1901 So. Rockwell St., Chicago
- Chucks, Keyway Cutting**  
Scully-Jones & Co., Ry. Exch. Bldg., Chicago
- Chucks, Lathe**  
Stevens Inc., John B., 27 Cleveland Place, New York
- Chucks, Magnetic**  
J. & H. Electric Co., Providence, R. I.
- Chucks, Oval**  
Frew Machine Co., Philadelphia, Pa.
- Clamps, Die**  
Danly Machine Specialties, Inc., 2116 So. 52nd Ave., Chicago
- Clutches, Friction**  
Conway Clutch Co., Cincinnati, O.  
Edgement Machine Co., Dayton, O.  
Foots Bros. Gear & Machine Co., 213 Curtis, Chicago
- Cold Saws**  
Jones Foundry & Machine Co., W. A., 4450 W. Roosevelt Road, Chicago
- Collets**  
Hardinge Brothers, Inc., 1770 Barton Ave., Chicago
- Comparators**  
Federal Products Corp., Providence, R. I.
- Contract Work Wanted**  
Burke Machine Tool Co., Conneaut, O.
- Core Drills**  
Bicknell-Thomas Co., Greenfield, Mass.
- Counterbores and Spot Facers**  
Bicknell-Thomas Co., Greenfield, Mass.  
Glenzer Co., J. C., Detroit, Mich.

## Classified Finding Index

### Couplings, Flexible

Foots Bros. Gear & Machine Co., 213 Curtis St., Chicago  
Jones Foundry & Machine Co., W. A., 4450 W. Roosevelt Road, Chicago  
Nicholson Co., W. H., Wilkes-Barre, Pa.

### Couplings, Friction Clutch

Conway Clutch Co., Cincinnati, O.  
Jones Foundry & Machine Co., W. A., 4450 W. Roosevelt Road, Chicago

### Couplings, Shaft

Jones Foundry & Machine Co., W. A., 4450 W. Roosevelt Road, Chicago  
Nicholson Co., W. H., Wilkes-Barre, Pa.

### Cranes, Portable

Canedy-Otto Mfg. Co., Chicago Heights  
Canton Foundry & Mach. Co., Canton, Ohio

### Crank Pin Turning Machine

Fedrick Tool & Machine Co., Philadelphia

### Cutters, Keyseating

Davis Keyseater Co., Rochester, N. Y.  
Scully-Jones & Co., 1901 So. Rockwell St., Chicago

### Cutters, Milling

Brown & Sharpe Mfg. Co., Providence, R. I.  
Reed-Prentice Corp., Worcester, Mass.  
Reisinger Mch. Tool Corp., Rochester, N. Y.

### Cutting-Off Machines

Scherr Co., Geo., 144 Liberty St., New York

### Cylinder Boring Machines, Portable

Fedrick Tool & Machine Co., Philadelphia

### Demagnetisers

J. & H. Electric Co., Providence, R. I.

### Die Making Machines

Oliver Instrument Co., Adrian, Mich.

### Dies, Automatic Self-Opening

Ricket-Shafer Co., Erie, Pa.

### Die Sets

Daily Machine Specialties, Inc., 2116 So. 52nd Ave., Chicago

### Die Sinking and Engraving Machines

Keller Mech. Eng. Corp., 68A Washington St., Brooklyn, N. Y.

### Dividing Heads

Scherr Co., Geo., 144 Liberty St., New York  
Stevens Inc., John B., 27 Cleveland Place, New York

### Drill Racks

Peerless Machine Co., Racine, Wis.

### Drilling Heads, Multiple

United States Drill Head Co., Cincinnati

### Drilling Machines, Automatic

Baker Brothers, Inc., Toledo, Ohio.

### Drilling Machines, Bench

Avey Drilling Machine Co., Cincinnati  
Buffalo Forge Co., Buffalo, N. Y.  
Burke Machine Tool Co., Cincinnati, Ohio  
Canedy-Otto Mfg. Co., Chicago Heights, Ill.  
National Elect. Prod. Co., 148 Baxter, N. Y.  
Sigourney Tool Co., Hartford, Conn.  
Stecher Co., Chas., 2452 N. Greenview Ave., Chicago

Taylor & Fenn Co., Hartford, Conn.  
Winterhoff Tool & Machine Co., Elkhart, Ind.

### Drilling Machines, Boiler

Cincinnati Bickford Tool Co., Oakley, Cincinnati, Ohio  
National Elect. Prod. Co., 148 Baxter, N. Y.

### Drilling Machines, Gang

Baker Brothers, Inc., Toledo, Ohio.  
Cincinnati Bickford Tool Co., Oakley, Cincinnati, Ohio

### Drilling Machines, Horizontal

Detroit Machine Tool Co., Detroit, Mich.  
Frew Machine Co., Philadelphia, Pa.  
National Elect. Prod. Co., 148 Baxter, N. Y.  
Stevens Inc., John B., 27 Cleveland Place, New York

### Drilling Machines, Multiple Spindle

Avey Drilling Machine Co., Cincinnati  
Baker Brothers, Inc., Toledo, Ohio.  
Cincinnati Bickford Tool Co., Oakley, Cincinnati, Ohio  
Detroit Machine Tool Co., Detroit, Mich.  
Foots-Burt Co., Cleveland, O.  
National Elect. Prod. Co., 148 Baxter, N. Y.  
Sigourney Tool Co., Hartford, Conn.  
Taylor & Fenn Co., Hartford, Conn.

### Drilling Machines, Portable Electric

Hisey-Wolf Machine Co., Cincinnati, O.  
Mali Tool Co., 7730 S. Chicago Ave., Chicago  
National Elect. Prod. Co., 148 Baxter, N. Y.  
Standard Electrical Tool Co., Cincinnati, O.  
Stow Flexible Shaft Co., Philadelphia, Pa.  
Strand Co., N. A., 6001 N. Lincoln St., Chicago  
Vim Tool Co., 149 Broadway, New York  
Winterhoff Tool & Machine Co., Elkhart, Ind.

### Drilling Machines, Fast

Canedy-Otto Mfg. Co., Chicago Heights, Ill.  
Hammond Mfg. Co., Cleveland, Ohio.  
National Elect. Prod. Co., 148 Baxter, N. Y.

### Drilling Machines, Radial

American Tool Works Co., Cincinnati, O.  
Canedy-Otto Mfg. Co., Chicago Heights, Ill.  
Cincinnati Bickford Tool Co., Oakley, Cincinnati, Ohio  
Drees Machine Tool Co., Cincinnati, O.  
Hammond Mfg. Co., Cleveland, Ohio.  
National Elect. Prod. Co., 148 Baxter, N. Y.  
Taylor & Fenn Co., Hartford, Conn.

### Drilling Machines, Semi-Automatic

Detroit Machine Tool Co., Detroit, Mich.

### Drilling Machines, Sensitive

Avey Drilling Machine Co., Cincinnati  
Baker Brothers, Inc., Toledo, Ohio.  
Buffalo Forge Co., Buffalo, N. Y.  
Burke Machine Tool Co., Cincinnati, Ohio  
Canedy-Otto Mfg. Co., Chicago Heights, Ill.  
Foots-Burt Co., Cleveland, O.  
Leland-Gifford Co., Worcester, Mass.  
National Elect. Prod. Co., 148 Baxter, N. Y.  
Sigourney Tool Co., Hartford, Conn.  
Stecher Co., Chas., 2452 N. Greenview Ave., Chicago

Taylor & Fenn Co., Hartford, Conn.  
U. S. Machine Tool Co., Cincinnati, O.

### Drilling Machines, Vertical

Avey Drilling Machine Co., Cincinnati  
Buffalo Forge Co., Buffalo, N. Y.  
Canedy-Otto Mfg. Co., Chicago Heights, Ill.  
Cincinnati Bickford Tool Co., Oakley, Cincinnati, Ohio  
Foots-Burt Co., Cleveland, O.  
Leland-Gifford Co., Worcester, Mass.  
Marsh Machinery Co. A. B., Cleveland, Ohio  
National Elect. Prod. Co., 148 Baxter, N. Y.  
Oesterlein Machine Co., Cincinnati, Ohio  
Sigourney Tool Co., Hartford, Conn.  
Standard Electrical Tool Co., Cincinnati, O.  
Stecher Co., Chas., 2452 N. Greenview Ave., Chicago

Taylor & Fenn Co., Hartford, Conn.

### Drills, Twist

Cleveland Twist Drill Co., Cleveland, Ohio.

### Emery Wheel Dressers and Cutters

Taylor & Fenn Co., Hartford, Conn.  
Western Tool & Mfg. Co., Springfield, O.

### Engravers, Mechanical and Hand

Schwerdtle Stamp Co., Bridgeport, Conn.

## Classified Finding Index

### Etching Machines, Electric

Brewster Co., Wm., Inc., 60 Church St., New York  
Lonsa Electric Equipment Co., Toledo, Ohio.

### Feeders, Oil and Soda Water

New Britain Machine Co., New Britain, Conn.

### Filing Machines

LaPorte Machine & Tool Co., LaPorte, Ind.  
Oliver Instrument Co., Adrian, Mich.  
Wardwell Mfg. Co., Cleveland, O.

### Filing and Sawing Machines

LaPorte Machine & Tool Co., LaPorte, Ind.

### Flexible Shaft Machinery

Keller Mech. Eng. Corp., 68A Washington St., Brooklyn, N. Y.  
Mall Tool Co., 7730 S. Chicago Ave., Chicago

### Flue Sheet Tools

Bicknell-Thomas Co., Greenfield, Mass.

### Forges

Canedy-Otto Mfg. Co., Chicago Heights, Ill.

### Forgings, Hollow Bored

American Hollow Boring Co., Erie, Pa.

### Furniture, Machine Shop

New Britain Machine Co., New Britain, Conn.  
Western Tool & Mfg. Co., Springfield, O.

### Gages, Cylindrical and Thread

Federal Products Corp., Providence, R. I.

### Gages, Dial

Federal Products Corp., Providence, R. I.  
Standard Gage Co., Poughkeepsie, N. Y.

### Gages, Pin, Plug, Ring and Snap

Standard Gage Co., Poughkeepsie, N. Y.

### Gages, Special

Standard Gage Co., Poughkeepsie, N. Y.

### Gauges, Taper

Hartford Special Mch. Co., Hartford, Conn.

### Gear Cutters

Brown & Sharpe Mfg. Co., Providence, R. I.  
Triplex Machine Tool Corp., 60 Church St., New York

### Gear Hobbars

Scherr Co., Geo., 144 Liberty St., New York  
Triplex Machine Tool Corp., 60 Church St., New York

### Gears

Boston Gear Works Sales Company, Norfolk Downe, Mass.  
Chicago Stock Gear Works, 106 S. Jefferson, Chicago  
Foote Bros. Gear & Machine Co., 213 Curtis St., Chicago  
Jones Foundry & Machine Co., W. A., 4450 W. Roosevelt Road, Chicago  
Massachusetts Gear & T. Co., Weburn, Mass.

### Gears, Herringbone

Jones Foundry & Machine Co., W. A., 4450 W. Roosevelt Road, Chicago

### Grinding Machine All, Pneumatic Turbine

Onsrud Machine Works, Inc., 2910 Palmer St., Chicago

### Grinding Machines, Belt

Gallmeyer & Livingston Co., Grand Rapids, Mich.  
Peerless Surfacing Machine Co., Troy, N. Y.  
Wallis Sales Corp., 98 Warren St., New York

### Grinding Machines, Bench

Gallmeyer & Livingston Co., Grand Rapids, Mich.  
Hill-Curtis Co., Kalamazoo, Mich.  
Hisey-Wolf Machine Co., Cincinnati, O.  
Scott-Banbach Mch. Co., 130 S. Clinton St., Chicago  
Standard Electrical Tool Co., Cincinnati, O.

### Grinding Machines, Catter, Reamer and Tool

Brown & Sharpe Mfg. Co., Providence, R. I.  
Gallmeyer & Livingston Co., Grand Rapids, Mich.  
Jarecki Mch. & T. Co., Grand Rapids, Mich.  
LeBlond Mch. Tool Co., R. E., Cincinnati, O.  
National Machine Tool Co., Racine, Wis.  
Oesterlein Machine Co., Cincinnati, Ohio  
Oliver Instrument Co., Adrian, Mich.  
Stevens Inc., John B., 27 Cleveland Place, New York  
Thompson Grinder Co., Springfield, Ohio

### Grinding Machines, Cylindrical

Brown & Sharpe Mfg. Co., Providence, R. I.  
Jarecki Mch. & T. Co., Grand Rapids, Mich.  
Thompson Grinder Co., Springfield, Ohio

### Grinding Machines, Die

Gallmeyer & Livingston Co., Grand Rapids, Mich.  
Jarecki Mch. & T. Co., Grand Rapids, Mich.  
Thompson Grinder Co., Springfield, Ohio

### Grinding Machines, Disc

Gallmeyer & Livingston Co., Grand Rapids, Mich.  
Porter Cable Machine Co., Syracuse, N. Y.  
Winterhoff Tool & Mch. Co., Elkhart, Ind.

### Grinding Machines, Drill

Gallmeyer & Livingston Co., Grand Rapids, Mich.  
Oliver Instrument Co., Adrian, Mich.

### Grinding Machines, External

Kenn Electric & Eng. Co., Newark, N. J.

### Grinding Machines, Face

Taylor & Fenn Co., Hartford, Conn.

### Grinding Machines, Flexible Shaft

Keller Mch. Eng. Corp., 68A Washington St., Brooklyn, N. Y.

### Grinding Machines, Hob

Scherr Co., Geo., 144 Liberty St., New York

### Grinding Machines, Internal

Kern Electric & Eng. Co., Newark, N. J.  
Mall Tool Co., 8389 S. Chicago Ave., Chicago  
National Machine Tool Co., Racine, Wis.  
Onsrud Machine Works, Inc., 2910 Palmer St., Chicago  
Taylor & Fenn Co., Hartford, Conn.  
Thompson Grinder Co., Springfield, Ohio

### Grinding Machines, Portable Electric

Hisey-Wolf Machine Co., Cincinnati, O.  
Keller Mech. Eng. Co., 68A Washington St., Brooklyn, N. Y.  
Mall Tool Co., 7730 S. Chicago Ave., Chicago  
National Machine Tool Co., Racine, Wis.  
Porter Cable Machine Co., Syracuse, N. Y.  
Scott-Banbach Mch. Co., 130 S. Clinton St., Chicago  
Standard Electrical Tool Co., Cincinnati, O.  
Stow Flexible Shaft Co., Philadelphia, Pa.  
Strand Co., N. A., 5091 N. Lincoln St., Chicago  
Vim Tool Co., 149 Broadway, New York  
Winterhoff Tool & Mch. Co., Elkhart, Ind.

### Grinding Machines, Snagging

Gallmeyer & Livingston Co., Grand Rapids, Mich.  
Hill-Curtis Co., Kalamazoo, Mich.  
Jarecki Mch. & T. Co., Grand Rapids, Mich.

### Grinding Machines, Surface

Gallmeyer & Livingston Co., Grand Rapids, Mich.  
Illinois Machine & Mfg. Co., LaSalle, Ill.  
Kern Electric & Eng. Co., Newark, N. J.  
Stevens Inc., John B., 27 Cleveland Place, New York  
Thompson Grinder Co., Springfield, Ohio

### Grinding Machines, Tap

Gallmeyer & Livingston Co., Grand Rapids, Mich.

## Classified Finding Index

### Grinding Machines, Tool

Hill-Curtis Co., Kalamazoo, Mich.  
Standard Electrical Tool Co., Cincinnati, O.  
Taylor & Fenn Co., Hartford, Conn.

### Grinding Machines, Universal

Brown & Sharpe Mfg. Co., Providence, R. I.  
Gallmeyer & Livingston Co., Grand Rapids, Mich.  
Thompson Grinder Co., Springfield, Ohio

### Hack Saw Blades

Armstrong-Blum Mfg. Co., 341 N. Francisco Ave., Chicago  
Peerless Machine Co., Racine, Wis.  
Racine Tool & Machine Co., Racine, Wis.  
Victor Saw Works, Inc., Middletown, N. Y.

### Hack Saw Machines

Armstrong-Blum Mfg. Co., 341 N. Francisco Ave., Chicago  
Peerless Machine Co., Racine, Wis.  
Racine Tool & Machine Co., Racine, Wis.

### Hammers, Chipping and Calking

Canton Pneumatic Co., Canton, Ohio

### Hardness Testers

Arnold Co., H. H. Inc., Rockland, Mass.  
Wilson-Macaulay Co., Inc., 735 E. 43rd St., New York

### Hob Grinders

Triplex Machine Tool Corp., 60 Church St., New York

### Hoists, Portable

Canton Foundry & Machine Co., Canton, Ohio

### Hose Couplings

Hest & Son, C. H., Salem, Ohio

### Hydraulic Machinery

Laurie Mfg. Co., 565 Washington, Chicago

### Index Centers, Single and Multi Spdl.

Brown & Sharpe Mfg. Co., Providence, R. I.  
Pay & Scott, Dexter, Maine  
Stevens Inc., John B., 27 Cleveland Place, New York

### Indicators, Dial

Federal Products Co., Providence, R. I.  
Standard Gage Co., Foughkeepsie, N. Y.

### Jigs and Fixtures

City Machine & Tool Works, Dayton, Ohio  
Hartford Special Mch. Co., Hartford, Conn.  
LaPorte Machine & Tool Co., LaPorte, Ind.

### Keyseater Machines

Baker Brothers, Inc., Toledo, Ohio.  
Barr & Son, John T., Brooklyn, N. Y.  
Chattanooga Mch. Co., Chattanooga, Tenn.  
Davis Keyseater Co., Rochester, N. Y.  
National Machine Tool Co., Cincinnati

### Lathe Accessories and Attachments

Cincinnati Lathe & Tool Co., Cincinnati, Ohio  
The Co-Operative Mch. Co., Cleveland, O.  
Pay & Scott, Dexter, Maine  
Reed-Prentice Corp., Worcester, Mass.  
Sidney Machine Tool Co., Sidney, Ohio

### Lathe Turrets

The Co-Operative Mch. Co., Cleveland, O.

### Lathes, Bench

Hardinge Brothers, Inc., 1770 Berton Ave., Chicago  
Monarch Machine Tool Co., Sidney, O.

### Lathes, Engine

American Tool Works Co., Cincinnati, O.  
Bradford Machine Tool Co., Cincinnati, O.  
Carroll Mch. Tool Co., A. V., Cincinnati, O.  
Carroll & Jamieson Mch. Tool Co., Batavia, O.  
Cincinnati Lathe & Tool Co., Cincinnati, O.  
Pay & Scott, Dexter, Maine  
Hamilton Tool Co., Hamilton, O.  
Hardinge Brothers, Inc., 1770 Berton Ave., Chicago  
LeBlond Mch. Tool Co., R. K., Cincinnati, O.  
McCabe Lathe & Machinery, Corp., J. J., 149 Broadway, New York

Monarch Machine Tool Co., Sidney, O.  
Porter-Cable Machine Co., Syracuse, N. Y.  
Reed-Prentice Corp., Worcester, Mass.  
Sebastian Lathe Co., Cincinnati, Ohio  
Sidney Machine Tool Co., Sidney, Ohio  
Springfield Machine Tool Co., Springfield, O.

### Lathes, Extension Bed Cap

LeBlond Mch. Tool Co., R. K., Cincinnati, O.  
Rahn-Larson Co., Cincinnati, O.

### Lathes, Gap

Carroll Mch. Tool Co., A. V., Cincinnati, O.  
LeBlond Mch. Tool Co., R. K., Cincinnati, O.

### Lathes, Hand

Stevens Inc., John B., 27 Cleveland Place, New York

### Lathes, Manufacturing

Cincinnati Lathe & Tool Co., Cincinnati, Ohio  
LeBlond Mch. Tool Co., R. K., Cincinnati, O.  
Reed-Prentice Corp., Worcester, Mass.  
Sundstrand Machine Tool Co., Rockford, Ill.

### Lathes, Precision

Cincinnati Lathe & Tool Co., Cincinnati, Ohio  
LeBlond Mch. Tool Co., R. K., Cincinnati, O.  
Reed-Prentice Corp., Worcester, Mass.

### Lathes, Short Bed

Monarch Machine Tool Co., Sidney, O.  
Porter-Cable Machine Co., Syracuse, N. Y.  
Reed-Prentice Corp., Worcester, Mass.  
Sidney Machine Tool Co., Sidney, Ohio

### Lathes, Tool Room

Cincinnati Lathe & Tool Co., Cincinnati, Ohio  
Reed-Prentice Corp., Worcester, Mass.

### Lathes, Turret

Bradford Machine Tool Co., Cincinnati, O.  
Cincinnati Lathe & Tool Co., Cincinnati, Ohio  
Monarch Machine Tool Co., Sidney, O.

### Mandrels, Expanding

Nicholson & Co., W. H., Wilkes-Barre, Pa.  
Western Tool & Mfg. Co., Springfield, O.

### Mandrels, Solid

Nicholson & Co., W. H., Wilkes-Barre, Pa.

### Millers, Tilted Rotary and Offset

Oesterlein Machine Co., Cincinnati, Ohio

### Milling Attachments

Brown & Sharpe Mfg. Co., Providence, R. I.  
Burke Machine Tool Co., Connecticut, Ohio  
Kearney & Trecker Corp., Milwaukee, Wis.  
LeBlond Mch. Tool Co., R. K., Cincinnati, O.  
Porter-Cable Machine Co., Syracuse, N. Y.  
Reed-Prentice Corp., Worcester, Mass.  
Stevens Inc., John B., 27 Cleveland Place, New York  
Taylor & Fenn Co., Hartford, Conn.

### Milling Machine Spacing Washers

The Co-Operative Mch. Co., Cleveland, O.

### Milling Machines, Bench

Burke Machine Tool Co., Connecticut, Ohio  
Sundstrand Machine Tool Co., Rockford, Ill.

### Milling Machines, Cam

Frew Machine Co., Philadelphia, Pa.

### Milling Machines, Hand

Burke Machine Tool Co., Connecticut, Ohio  
Frew Machine Co., Philadelphia, Pa.  
Sundstrand Machine Tool Co., Rockford, Ill.  
Superior Machine & Eng. Co., Detroit, Mich.  
U. S. Machine Tool Co., Cincinnati, O.

### Milling Machines, Horizontal

Oesterlein Machine Co., Cincinnati, Ohio

### Milling Machines, Manufacturing

Kearney & Trecker Corp., Milwaukee, Wis.

### Milling Machines, Plan

Brown & Sharpe Mfg. Co., Providence, R. I.  
Burke Machine Tool Co., Connecticut, Ohio  
Kearney & Trecker Corp., Milwaukee, Wis.  
LeBlond Mch. Tool Co., R. K., Cincinnati, O.  
Sundstrand Machine Tool Co., Rockford, Ill.



# Classified Finding Index

**Milling Machines, Portable**  
Pedrick Tool & Machine Co., Philadelphia

**Milling Machines, Spine**  
Taylor & Fenn Co., Hartford, Conn.

**Milling Machines, Universal**  
Brown & Sharpe Mfg. Co., Providence, R. I.  
Kearney & Trecker Corp., Milwaukee, Wis.  
LeBlond Mch. Tool Co., R. E., Cincinnati, O.

**Milling Machines, Vertical**  
Brown & Sharpe Mfg. Co., Providence, R. I.  
Hurke Machine Tool Co., Conneaut, Ohio  
Kearney & Trecker Corp., Milwaukee, Wis.  
LeBlond Mch. Tool Co., R. E., Cincinnati, O.  
Need Prentice Corp., Worcester, Mass.  
Taylor & Fenn Co., Hartford, Conn.

**Mills, Adjustable Hollow**  
Reisinger Mch. Tool Corp., Rochester, N. Y.

**Name Plates, Etched and Stamped**  
Schwerdtle Stamp Co., Bridgeport, Conn.

**Nut Setters, Electric**  
Vim Tool Co., 149 Broadway, New York

**Oil Cups**  
Gits Bros. Mfg. Co., 1940 S. Elmhurst Ave.,  
Chicago  
Tucker, W. W. & C. F., Hartford, Conn.

**Oil Extractors**  
Tolburat Machine Works, Troy, N. Y.

**Pattern Shop Machinery**  
Towsley Mfg. Co., John T., Cincinnati

**Pins, Leader and Dowel**  
Dandy Machine Specialties, Inc., 2116 S. 52nd  
Ave., Chicago

**Pipe Bending Machines**  
Pedrick Tool & Machine Co., Philadelphia

**Planers, Valve Seat, Portable**  
Pedrick Tool & Machine Co., Philadelphia

**Planing Machines**  
Cincinnati Planer Co., Cincinnati, Ohio  
Cleveland Planer Co., Cleveland, Ohio

**Point Thinning Machines**  
Oliver Instrument Co., Adrian, Mich.

**Polishing and Buffing Machines**  
Excelsior Tool & Mch. Co., E. St. Louis, Ill.  
Hill-Curtis Co., Kalamazoo, Mich.  
Hiney-Wolf Machine Co., Cincinnati, O.  
Mail Tool Co., 7730 S. Chicago Ave., Chicago  
Nadco Company, Natick, Mass.  
New Britain Machine Co., New Britain, Conn.  
Standard Electrical Tool Co., Cincinnati, O.

**Presses, Arbor**  
Atlas Press Co., Kalamazoo, Mich.  
Lourie Mfg. Co., 565 Washington, Chicago  
Nicholson & Co., W. H., Wilkes-Barre, Pa.  
Sheldon Machine Co., 3253 Cottage Grove  
Ave., Chicago  
Wilson, R. K., Buffalo, N. Y.

**Presses, Branching**  
Lourie Mfg. Co., 565 Washington, Chicago

**Presses, Drawing**  
Lourie Mfg. Co., 565 Washington, Chicago

**Presses, Flanging**  
Lourie Mfg. Co., 565 Washington, Chicago

**Presses, Foot**  
Rockford Iron Works, Rockford, Ill.  
Taylor & Fenn Co., Hartford, Conn.

**Presses, Forging**  
Lourie Mfg. Co., 565 Washington, Chicago

**Presses, Forming**  
Lourie Mfg. Co., 565 Washington, Chicago

**Presses, Power**  
Hendley & Whittemore Co., Beloit, Wis.  
Lourie Mfg. Co., 565 Washington, Chicago  
Rockford Iron Works, Rockford, Ill.

**Presses, Punch**  
Lewthwaite Mch. Co., T. H., 311 E. 47th., N. Y.  
Rockford Iron Works, Rockford, Ill.

**Presses, Screw**  
Fall River Grinding & Machine Co., Fall  
River, Mass.  
Jarecki Mch. & T. Co., Grand Rapids, Mich.  
Towsley Mfg. Co., John T., Cincinnati

**Presses, Wheel**  
Lourie Mfg. Co., 565 Washington, Chicago

**Profiling Machines**  
Frew Machine Co., Philadelphia, Pa.  
Oliver Instrument Co., Adrian, Mich.

**Pulley Machinery**  
Avery Drilling Machine Co., Cincinnati

**Pulleys, Iron, Solid and Split**  
Conway Clutch Co., Cincinnati, O.  
Jones Foundry & Machine Co., W. A., 4450  
W. Roosevelt Road, Chicago

**Pumps, Coolant**  
Fulflo Specialties Co., Blanchester, O.

**Pumps, Hydraulic**  
Lourie Mfg. Co., 565 Washington, Chicago

**Pumps, Lubricant**  
Bathman Machinery Co., Cincinnati, O.

**Punch Press Feeds**  
Rockford Iron Works, Rockford, Ill.

**Punch, Shear and Bender, Hand**  
Armstrong-Blum Mfg. Co., 341 N. Francisco  
Ave., Chicago

**Punches, Hand**  
Armstrong-Blum Mfg. Co., 341 N. Francisco  
Ave., Chicago  
Hendley & Whittemore Co., Beloit, Wis.  
Lewthwaite Mch. Co., T. H., 417 E. 31st St.,  
New York  
Whitney Metal Tool Co., Rockford, Ill.

**Punches, Power**  
Hendley & Whittemore Co., Beloit, Wis.

**Punches and Dies**  
Hendley & Whittemore Co., Beloit, Wis.  
Lewthwaite Mch. Co., T. H., 311 E. 47th., N. Y.  
Rockford Iron Works, Rockford, Ill.

**Punches and Shears**  
Buffalo Forge Co., Buffalo, N. Y.  
Excelsior Tool & Mch. Co., E. St. Louis, Ill.

**Pyrometers**  
Wilson-Maclean Co., Inc., 736 E. 143rd St.,  
New York

**Racks, Bar Stock**  
New Britain Machine Co., New Britain, Conn.  
Yoke Supply Co., Wm. S., Canton, O.

**Reamers, Adjustable**  
Cleveland Twist Drill Co., Cleveland, Ohio.  
Schellenbach-Hunt Tool Co., Cincinnati, O.

**Reamers, Expanding**  
Lambert Mch. & Eng'g Co., Cleveland, O.

**Reamer Holders**  
Nicholson & Co., W. H., Wilkes-Barre, Pa.

**Reels, Extension**  
Cincinnati Specialty Mfg. Co., Cincinnati, O.

**Riveters, Multiple Spindle**  
Grant Mfg. & Mch. Co., Bridgeport, Conn.

**Riveters, Pneumatic**  
Grant Mfg. & Mch. Co., Bridgeport, Conn.

**Riveting Machine Equipment**  
Linley Bros. Co., Bridgeport, Conn.

# Classified Finding Index

## Riveting Machines

Canton Pneumatic Co., Canton, Ohio  
Grant Mfg. & Mch. Co., Bridgeport, Conn.

## Red Cutters

Armstrong-Blum Mfg. Co., 341 N. Francisco  
Av., Chicago  
Hendley & Whittemore Co., Beloit, Wis.  
Lehighvale Mch. Co., T. H., 311 E. 47th N.Y.  
Tucker, W. W. & C. F., Inc., Hartford, Conn.

## Rotary Tables, Hand Feed

Stevens Inc., John B., 27 Cleveland Place,  
New York

## Safety Stops

Atlantic Co., Box 133, Sta. B., Brooklyn, N.Y.

## Saw Sharpening Machines

Ruther Bros. Saw Mfg. Co., Rochester, N.Y.  
Wardwell Mfg. Co., Cleveland, O.

## Saws, Electric Hand

Reed-Prentice Corp., Worcester, Mass.  
Saws, Metal Cutting Circular and Hand  
Huther Bros. Saw Mfg. Co., Rochester, N.Y.

## Scraping Machines, Hand & Pneumatic

Anderson Brothers Mfg. Co., Rockford, Ill.

## Screw Drivers, Electric

Hiley Wolf Machine Co., Cincinnati, O.  
Vinn Tool Co., 149 Broadway, New York

## Screw Driving Machines, Automatic

Raynolds Machine Co., Mansfield, Ohio  
Screw Machine Products  
National Acme Co., Cleveland, Ohio

## Screw Machines, Automatic

National Acme Co., Cleveland, Ohio  
New Britain Mch. Co., New Britain, Conn.

## Set-Up Appliances

Standard S. p. Equip. Co., Philadelphia, Pa.

## Shafts, Flexible

Keller Mch. Eng. Corp., 58A Washington St.,  
Brooklyn, N. Y.  
Mail Tool Co., 7730 S. Chicago Ave., Chgo.  
Stow Flexible Shaft Co., Philadelphia, Pa.  
Strand Co., N. A., 6001 N. Lincoln St., Chgo.

## Shafts, Steel

American Hollow Boring Co., Erie, Pa.

## Shaping Machines

American Tool Works Co., Cincinnati, O.  
Osborne & Sexton Mch. Co., Columbus, O.  
Rhodes Mfg. Co., Hartford, Conn.  
Smith & Mills Co., Cincinnati

## Springfield Machine Tool Co., Springfield, O.

## Shears, Alligator

Canton Foundry & Machine Co., Canton, O.

## Shears, Hand

Armstrong-Blum Mfg. Co. 341 N. Francisco  
Av., Chicago  
Hendley & Whittemore Co., Beloit, Wis.  
Lehighvale Machine Co., T. H., 311 E. 47th  
St., New York

## Tucker, W. W. & C. F., Inc., Hartford, Conn.

## The Unishear Co., 270 Lafayette, New York

## Whitney Metal Tool Co., Rockford, Ill.

## Shears, Electric Hand

The Unishear Co., 270 Lafayette, New York

## Shears, Power

Hendley & Whittemore Co., Beloit, Wis.  
The Unishear Co., 270 Lafayette, New York

## Sheet Metal Cutting Tools

The Unishear Co., 270 Lafayette, New York

## Slotting Machines

Rhodes Mfg. Co., Hartford, Conn.

## Slotting Machines, Screw Head

Stevens Inc., John B., 27 Cleveland Place,  
New York

## Spacing Washers

Detroit Stamping Co., Detroit, Mich

## Special Tools and Machinery

Bradford Machine Tool Co., Cincinnati, O.  
City Machine & Tool Works, Dayton, Ohio.  
Foots Bros. Gear & Machine Co., 213 Curtiss  
St., Chicago

## Hilnols Machine & Mfg. Co., LaSalle, Ill.

## LaPorte Machine & Tool Co., LaPorte, Ind.

## Reed-Prentice Corp., Worcester, Mass.

## Stecher Co., Chan., 2452 N. Greenview Ave., Chicago

## Superior Machine & Eng. Co., Detroit, Mich.

## Speed Reducers, Worm, Spur and

## Herringbone

Foots Bros. Gear & Machine Co., 213 Curtiss  
St., Chicago

## Jones Foundry & Machine Co., W. A., 4450 W. Roosevelt Road, Chicago

## Spindles, Air Driven

Ex-Cell-O Tool & Mfg. Co., Detroit, Mich.

## Spindles, Grinding

Ex-Cell-O Tool & Mfg. Co., Detroit, Mich.

## Spring Taper Sleeves

Scherr Co., Geo., 144 Liberty St., New York

## Sprockets

Foots Bros. Gear & Machine Co., 213 Curtiss  
St., Chicago

## Jones Foundry & Machine Co., W. A., 4450 W. Roosevelt Road, Chicago

## Massachusetts Gear & T. Co., Woburn, Mass.

## Stamps, Steel and Rubber

Schwerdtle Stamp Co., Bridgeport, Conn.

## Stencils, Brass and Oil Board

Schwerdtle Stamp Co., Bridgeport, Conn.

## Stools and Chairs, Factory

Chicago Wire Chair Co., 619 N. La Salle St.,  
Chicago

## Straightening Machines

Springfield Machine Tool Co., Springfield, O.  
Towsley Mfg. Co., John T., Cincinnati  
Whitney Metal Tool Co., Rockford, Ill.

## Stud Setters

Proconier Safety Chuck Co., 18 S. Clinton  
St., Chicago

## Tap Extractors

Walton Co., Hartford, Conn.

## Tap Holders

Hicknell-Thomson Co., Greenfield, Mass.  
Proconier Safety Chuck Co., 18 S. Clinton  
St., Chicago

## Tapping Machines and Attachments

Alto Mfg. Co., 1647 Weifram St., Chicago.  
Avery Drilling Machine Co., Cincinnati  
Baker Brothers, Inc., Toledo, Ohio.

## Hicknell-Thomson Co., Greenfield, Mass.

## Burke Machine Tool Co., Conneaut, Ohio

## Eastern Tube & Tool Co., Inc., 580 Johnson Ave., Brooklyn, N.Y.

## Frew Machine Co., Philadelphia, Pa.

## Hammered Mfg. Co., Cleveland, Ohio

## Leland-Gifford Co., Worcester, Mass.

## Proconier Safety Chuck Co., 18 S. Clinton St., Chicago

## Rickert-Shafer Co., Erie, Pa.

## Whitney Metal Tool Co., Rockford, Ill.

## Thread Dies

Colven, J. M., Yonkers, N. Y.

## Thread Millers

Scherr Co., Geo., 144 Liberty St., New York  
Triplex Machine Tool Corp., 50 Church St.,  
New York

## Threading Machines

Rickert-Shafer Co., Erie, Pa.

## Threading Machines, Automatic, Stud

Grant Mfg. & Mch. Co., Bridgeport, Conn.

## Threading Tools

Armstrong Bros. Tool Co., 308 N. Francisco  
Av., Chicago

Zoerman-Clark Mfg. Co., 225 W. Huron St.,  
Chicago

## Classified Finding Index

### Tool Holders

Armstrong Bros. Tool Co., 808 N. Francisco  
Av., Chicago  
Western Tool & Mfg. Co., Springfield, O.

### Tool Racks

Chicago Wire Chair Co., 319 N. La Salle St.,  
Chicago

### Tools, Boring

Armstrong Bros. Tool Co., 808 N. Francisco  
Av., Chicago

### Tools, Lathe and Planer

Armstrong Bros. Tool Co., 808 N. Francisco  
Av., Chicago

### Tools, Machinists'

Armstrong Bros. Tool Co., 808 N. Francisco  
Av., Chicago

### Tools, Spot Facing

Reisinger Mch. Tool Corp., Rochester, N. Y.

### Trucks, Machine Shop

New Britain Machine Co., New Britain, Conn.  
Towley Mfg. Co., John T., Cincinnati

### Tube Flanging Machines

Grant Mfg. & Mch. Co., Bridgeport, Conn.

### Turntables

Canton Foundry & Machine Co., Canton, O.

### Turret Tool Posts

Fay & Scott, Dexter, Maine

### Universal Joints

American Tool Works, Inc., Hartford, Conn.  
Borgeson Mfg. Co., Inc., Torrington, Conn.  
Boston Gear Works Sales Company, Norfolk  
Downs, Mass.

### Used and Rebuilt Machinery

Badger-Packard Mch. Co., Milwaukee, Wis.  
Bath & Co., Cyril J., Cleveland, O.  
Bennett Mch. Co., 60 Church St., New York  
Bernstein & Co., Geo. M., 549 W. Washing-  
ton Blvd., Chicago  
Broadway Machinery Co., 211 Centre St.,  
New York, N. Y.  
Brown Machinery Co., St. Louis, Mo.  
Brownell Machinery Co., Providence, R. I.  
Carlsen Machinery Co., Davenport, Iowa.  
Central States Machinery Co., 134 S. Clinton,  
Chicago

Cincinnati Mch. & Supply Co., Cincinnati, O.  
Clarkson, D. R., Rochester, N. Y.  
Clinton Mch. Co., 123 S. Clinton St., Chgo.  
Co-Operative Mch. Co., Cleveland, Ohio.  
Davis Machinery Exchange, Toledo, O.  
Detroit Machinery Exchange, Detroit, Mich.  
Donahue Steel Products Co., 74th and  
Ashland Ave., Chicago

Eastern Machinery Co., Cincinnati, O.  
Empire Machinery Exchange Co., Inc.,  
Cleveland, Ohio  
Easley Machinery Co., E. L., 651 Washington  
Bldg., Chicago

Foster Machinery Co., Cleveland, O.  
Harris Bros. Co., 35th & Iron, Chicago  
Hill, Clarke & Co., 648 W. Washington  
Bldg., Chicago  
Hyman & Sons, Joseph, Philadelphia  
Indianapolis Mch. & Supply Co., Indian-  
apolis, Ind.

International Mch. Co., Detroit, Mich.  
Johnson & Sons Machinery Co., Wm. C.,  
St. Louis, Mo.

Jones Machine Tool Co., Cincinnati, O.  
Kinsley Co., E. A., Cincinnati, O.  
Klauber Mch. Co., E. L., St. Louis.  
Lee Machinery Co., Inc., Detroit, Mich.  
Little Co., W. P., Cleveland, O.  
Lucas & Son, Inc., J. L., Bridgeport, Conn.  
McCabe Lathe & Machinery Corp., J. J.,  
149 Broadway, New York  
McDonald Machinery Co., St. Louis

Manning, Maxwell & Moore, Inc., 27 No.  
Jefferson, Chicago  
Marr-Galbreath Mch. Co., Pittsburgh, Pa.  
Midland Equip. Co., 400 So. Clinton, Chgo.

### Used and Rebuilt Machinery—Cont.

Mid-West Machine Tool & Supply Company,  
Davenport, Iowa  
Miles Machinery Co., Saginaw, W. S., Mich.  
Molitor Mch. Co., Chas., 118 S. Clinton St.,  
Chicago  
Morey and Co., Inc., 408 Broome St., N. Y.  
Metch & Merryweather Machinery Co.,  
Cleveland, O.  
Nelson Machinery Co., Green Bay, Wis.  
Norton-Broadway Mch. Co., Cincinnati, O.  
O'Brien Machinery Co., Philadelphia  
Osborne & Sexton Mch. Co., Columbus, O.  
Palmer-Edwards Co., Flint, Mich.  
Peninsular Machinery Co., Detroit, Mich.  
Randle Machinery Co., Cincinnati, O.  
Reed-Prentice Corp., Worcester, Mass.  
Reeve-Fritts Co., 558 W. Washington, Chgo.  
Reliance Mch. Sales Co., Pittsburgh, Pa.  
Rentchler & Co., J. P., 606 W. Washington  
Bldg., Chicago  
Riverside Machinery Depot, Detroit, Mich.  
Rosenfeld Mch. Co., 942 W. Lake St., Chgo.  
Russell Machine Co., Pittsburgh, Pa.  
Saltzman, B. L., 524 W. Van Buren, Chgo.  
Scott-Bansbach Mch. Co., 130 S. Clinton,  
Chicago

Selfrest-Kistad Machinery Co., Dayton, O.  
Simmons Machine Tool Corp., Albany, N. Y.  
Stoehr Machinery Co., A. M., 415 Mid-City  
Bank Bldg., Chicago  
Strafer Machinery Co., Jersey City, N. J.  
Strong, Carlisle & Hammond Co., Cleveland  
Sun Machinery Co., Newark, N. J.  
Syracuse Supply Co., Syracuse, N. Y.  
Taylor-Hall Welding Corp., Worcester, Mass.  
Toledo Machinery Exchange, Toledo, Ohio  
Tubor-Vetick & Co., 630 W. Lake St., Chgo.  
United Mch. & Supply Co., St. Louis  
Wertman Mch. Co., M. A., Cleveland, O.  
West Penn Machinery Co., Pittsburgh, Pa.  
White Mch. Co., A. D., 108 N. Jefferson  
St., Chicago  
Winter, Herman L., Philadelphia

### Vices, Drilling Machine

Armstrong-Brom Mfg. Co., 941 N. Francisco  
Av., Chicago  
Armstrong Bros. Tool Co., 808 N. Francisco  
Av., Chicago  
Marsh Machinery Co., A. E., Cleveland, Ohio  
Martin Tool & Die Works, J. E., Springfield, O.  
Sheldon Machine Co., 2353 Cottage Grove  
Ave., Chicago

### Vices, Machinists'

New Britain Machine Co., New Britain, Conn.  
Sheldon Machine Co., 2353 Cottage Grove  
Ave., Chicago  
Western Tool & Mfg. Co., Springfield, O.

### Vices, Milling Machine

Hartford Special Mch. Co., Hartford, Conn.  
Marsh Machinery Co., A. E., Cleveland, Ohio  
Sheldon Machine Co., 2353 Cottage Grove  
Ave., Chicago  
Stevens Inc., John B., 27 Cleveland Place,  
New York

### Vices, Shaper

Sheldon Machine Co., 2353 Cottage Grove  
Ave., Chicago

### Welders, Electric Spot

Taylor-Winfield Corp., Warren, O.

### Wheels, Grinding, Polishing & Sanding

Abrasive Wheel & Equipment Co., Inc.,  
Philadelphia, Pa.  
Bealy Co., Chas. H., 119 N. Clinton, Chgo.

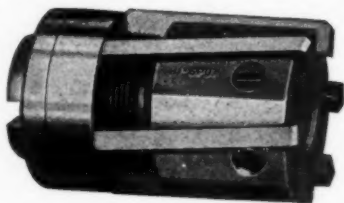
### Wood Working Machinery

Frew Machine Co., Philadelphia, Pa.  
Hendley & Whittemore Co., Beloit, Wis.  
New Britain Machine Co., New Britain, Conn.  
Porter-Cable Machine Co., Syracuse, N. Y.  
Towley Mfg. Co., John T., Cincinnati

### Worms

Massachusetts Gear & T. Co., Woburn, Mass.  
Jones Foundry & Machine Co., W. A., 448  
W. Roosevelt Road, Chicago

## **"X-L" Adjustable Inserted Spiral Blade Shell and Machine Reamer**



Reamers made with Left Hand Angle Cutting Blades do not dig in, and all chatter is eliminated. This means free, clean cutting, smooth holes, and increased production.

The range of expansion is from .100" in the smaller sizes to .150" in the larger sizes. Made with High Speed Steel Blades.

This is a real production reamer. The left hand helical flutes cut fast and clean. Made only in high speed steel. Made with straight and tapered shanks.

**All Sizes Carried in Stock**

*Catalog on Request*

### **The Schellenbach-Hunt Tool Co.**

**118 Opera Place, Cincinnati, Ohio**

**Agents: E. E. Fletcher, 6007 Euclid Ave., Cleveland, Ohio**

## Used and Rebuilt Machinery Section

Lists of Used and Rebuilt Machinery, either For Sale, Wanted, or For Exchange, set in uniform style, will be published in the Classified Section at the rate of **35 cents a line**, across the page, each issue, plus **\$2.75** for name and address. Minimum charge, **\$5.50**. No display permitted.

**Write directly to those offering the machines for sale**, for prices and full descriptions. If what you seek is not advertised, use the blank enclosed to make known your wants in either new or used machinery, and the publisher will pass them along to advertisers.

### FOR SALE BY

<b>General Machinery Corporation,</b>	<b>170 Summer St., Boston, Mass.</b>
Drill, Allen No. 4 rd. and sq. tables.	Miller, Oesterlein No. 20 universal.
Drill, Sibley 24" slid. hd., b. g., p. f.	Miller, Burke No. 2 bench with p. f.
Forge, American No. 2 gas.	Motor, G. E. Co. 50 h. p., 1150 r. p. m., 550-3-60.
Furnace, oven American No. 16.	Shaper, Smith & Mills 20", b. g.
Lathe, Flather 14"x6" q. c. g., c. r.	

### FOR SALE BY

<b>B. L. Saltzman,</b>	<b>524 W. Van Buren St., Chicago, Ill.</b>
Bolt threader, Geometric $\frac{3}{4}$ " to 1 $\frac{1}{2}$ ".	Motor, General Electric $\frac{1}{2}$ h. p., 1 ph., 60 cy., 110/220 v., new, \$26.
Compressors, air.	Press, No. 1 Toledo.
Drill presses, 14, 20, 26 and 32.	Press, No. 3 Bliss Stiles.
Grinders.	Press, No. 5 Niagara punch.
Lathes, 17"x8' & 15"x8' Sidney.	Shaper, 18" Barker.
Lathe, 14x6 Rockford.	Shaper, 16" Gould & Eberhardt.
Lathe, 14x6 Reed.	

Factory transmission, electric motors.

### FOR SALE BY

<b>The Reeve-Fritts Co.,</b>	<b>558-560 W. Washington Blvd., Chicago, Ill.</b>
Boring mill, 24" Lucas horizontal.	Lathe, 12"x5' Pratt & Whitney tool makers.
Die filer, No. 3 Barry.	Lathe, 14"x6' Lodge & S. q. c. g.
Drill, 4' Ryerson radial.	Miller, No. 2 Rockford, plain.
Drill, 14" Leland h. s., b. b.	Miller No. 2 Ford-Smith universal.
Drill, 16" Sipp b. b.	Planer, No. 3 $\frac{1}{2}$ Fox, hand or power.
Drill, 5 spindle Fox. $\frac{3}{4}$ " cap.	Planer, 24"x24"x6' American.
Gear cutter, No. 98 G & E. spur & b.	Press, No. 3-P Am. Can solid bk.
Grinder, 8"x20" Fitchburg plain.	Press, No. 1 Massillon trim.
Grinder, No. 1 LaSalle surface.	Press, No. 0 LaSalle bench.
Lathe, 14"x6' Bradford q. c. g.	

### FOR SALE BY

<b>C. C. Howarth Co.,</b>	<b>912 E. Larned St., Detroit, Mich.</b>
Dollar's Worth for Dollar	
Drill, 4' Fosdick radial, gear box drive.	
Gear cutter, No. 3 Newark.	
Gear hobber, No. 13 Barber & Colman.	
Grinder, No. 75 Heald internal.	
Grinder, No. 80 Heald internal.	
Grinder, 10"x72" Landis, self-contained.	
Lathe, 8"x96" Lo-Swing.	
Mill, No. 3 Brown & Sharpe vertical, single pulley drive.	
Millers, 8" Pratt & Whitney automatic, (5).	

## USED AND REBUILT MACHINERY

### FOR SALE BY

#### A. M. Stoehr Machinery Co.,

Bolt cutter, 3-spd. Acme, 1" cap.  
Boring mill, Beam & Smith horizontal, 5" bar; 48" Colburn, 2 hds.  
Furnace, case hardening, Eclipse gas.  
Hammers, 50 lb. Little Giant; 300 lb. Beaudry; 1500 lb. W. & W., board drop.  
Miller, 40" Ohio, auto. rotary.  
Presses, R. & K. dbl. ck., 36" bet. column, roller feed, 2 1/2" stroke; No. 1 Bliss, toggle, belt drive.

#### 106 S. Jefferson St., Chicago, Ill.

Planers, 70x60x16' P. & W., 4 heads.  
Press, 600 ton Amer. Can embossing.  
Punch and shears, No. 5 Southwark, 48 throat, arct. jaw; E. F. Cleveland 40" t. and 10 others.  
Riveters, 3-A, 4-A & 5-A, high spd.; two Allen Pinch Bug; Rock River, 42" stake, 3" rivets.  
Rolls, 14" New Doty, 7/16".  
Shears, Kling splitting, 1/2" cap.  
Wire straighteners, up to 1/2" cap.

### FOR SALE BY

#### Scott-Bansbach Machinery Co.,

#### 130 So. Clinton St., Chicago, Ill.

Auto. screw mach., Cincinnati, 5-spindle, 1/2"	\$ 750.
Auto. screw mach., Cleveland, 1/2", Model A	150.
Bolt cutter, 2" D. & H., double head	300.
Centering machine, Whiton swivel	75.
Drill, 21" Cincinnati sta. head, with tapping attachment	200.
Drill, 1-spindle Allen h. s., b. b., 14" with pump	175.
Drill, 4-spindle Barr, plain bearing	225.
Drill, radial, 3" American sensitive	200.
Drill, radial 3" American plain cone drive, with tapping attachment	600.
Drill, 20"—2-spindle Hoefer power feed	250.
Drill, 28" Superior, sliding head, back geared	325.
Filing machine, Cochrane-Bly, floor type	100.
Grinder, 36" Valley City disc	250.
Grinder, No. 68 Heald, with fixtures, b. b. spindle	900.
Grinder, new No. 3 Acme full universal 1400 lbs.	500.
Grinder, No. 3 Norton universal cutter & tool, p. f.	450.
Grinder, No. 2 Reid automatic surface	350.
Grinder, No. 2 W. & M. automatic surface, 8 1/2"x20"	350.
Grinder, 12x12x48 Springfield Brandes mag. chuck & segment wheel	2,000.
Hammer, 50 lbs., No. 1 Standard drop	150.
Hammer, No. 5A High Speed riveting	400.
Lathe, 14"x8" Flatner, quick change, taper and chuck	250.
Lathe, 18"x9" Chard semi-quick change gear	400.
Lathe, 19"x11" Chard, semi-quick change gear	425.
Miller, Whitney, Standard and U. S., hand	125.
Miller, No. 0 Cincinnati plain, power feed	250.
Miller, No. 3 Kempsmith plain, with dividing head	550.
Miller, Briggs, G. & E. manufacturing, 16"	200.
Miller, No. 3 Becker vertical	325.
Miller, No. 5 Becker vertical, no rotary	500.
Miller, No. 7 Becker, Lincoln type	150.
Miller, No. 21 Garvin power feed, oil pump	150.
Miller, Hendey, Lincoln type	100.
Miller, Ingersoll slab, 42"x36"x9"	1,750.
Oil separator, National, about 1/2 bushel	75.
Planer, 24x24x8 Fitchburg, 1 head	400.
Planer, 32x32x8 Pond, 1 head	750.
Press, No. 5 R. & K. o. b. i., 5500 lbs.	525.
Press, No. 6 R. & K. o. b. i., 7200 lbs.	725.
Saw, 6x6 Peerless h. s., d. c. motor \$150, a. c. motor	175.
Saw, Racine metal band, nearly new	175.
Shaper, 21" Milwaukee, back geared, crank	550.
Shaper, 24" Rockford universal combination	1100.
Screw machine, P. & W. 1/2"x4, complete	150.
Screw machine, No. 7 Foster 2 1/2", p. f. f. h.	550.
Slotter, 12" Putnam universal	1,000.
Turret lathe, No. 4 Briggs 1 1/2" friction head, full equipment	250.
Turret lathe, 24" Steinlee, 5/8" hole, side carriage	700.

# USED AND REBUILT MACHINERY

## FOR SALE BY

**Marr-Galbreath Machinery Co.,**

**58 Water St., Pittsburgh, Pa.**

Air compressor, 12 cu. ft. Natl. belt.  
Air comp. 8x6, dble cyl. Gardner.  
Air comp. 4½x5" Ingersoll-Rand.  
Air comp., 4½x4½ Curtis, 24 cu. ft.  
Air comp., 888 cu. ft. a. c. motor.  
Arbor presses, Nos. 0, 1, 2 & 3.  
Band saws, 36" Fay No. 56.  
Bender, angles, hand, No. 9 Buffalo.  
Blowers & exh., 6, 8, 9 & 16" opening.  
Blowers, Nos. ½ and ¾ Root.  
Bolt cutter, 1½" Morgan, double hd.  
Bolt cutter, 1½" Acme, triple head.  
Boring mill, 30" King, turret head.  
Boring mill, 42" King, 2 heads.  
Boring mill, 42" Bullard, 2-heads.  
Boring mill, 51" Bullard, 2-heads.  
Brake, 8" x12 ga. Power, Chicago.  
Brake, 10" x18 ga. D. & K. hand.  
Burnishing barrel, 24" x16", glass lined  
Cold header, 1" W-F., solid die.  
Cold header, ¾" W-F., solid die.  
Cold saws, Nos. 11½ and 12 Higley.  
Crane, 5-ton P. & H. 44' 6" span, a.c.  
Crane, 10-ton, 40' span, 220 v. d. c.  
Draw bench, 40" W-F., 50 h. p. mtr.  
Drill, 20" Prentice, plain.  
Drill, 25" Superior, b. g., s. h.  
Drill, radial, 30" Taylor & Fenn.  
Drill, radial, 7" Prentice, s. p. d.  
Drill, radial, 5' Prentice,  
Drill, 3' Prentice, t. a.  
Drills, sensitive floor, 10", 12", 14".  
Flanging mch. Sievert, 10 ga. hand.  
Forge, 92-D. Buffalo, 27x33".  
Forging mach., 3" Acme, steel, m. d.  
Forging and rivet header, 1" Ajax.  
Furnaces, oil tempering, 10"x10"x10".  
Gear and pinion cutter, No. 3 Sloan.  
Grinder, No. 1 Norton universal  
tool and cutter.  
Grinder, No. 3 Brown & Sharpe  
univ. cutter & reamer.  
Grinder, No. 11 B. & S., plain.  
Grinder, surface, No. 1W & M., m. d.  
Grinder, d. e. safety, 16"x3" wheels.  
Grinder, No. 18-D Rowbottom.  
Grinder, No. 60 Heald, 19" arm.  
Hack saw, 6x6", Racine.  
Hammer, 40 lb. & 75 lb. Bradley.  
Hammer, 2-B. Nazel, belt and motor  
Hammer, 2500 lb. Chbg., s. f. steam.  
Hammers, atm. s. f. 600, 1100, 1500 lbs.  
Hammer, 1000 lb Chbg., steam drop.  
Hammer, 250 Chbg. board drop.  
Hoists, air, 700, 800 & 1300 lbs.  
Keyseater, No. 2 M. & M., cutters.  
Keyway cutter, 24" Morton, cap. 24".  
Lathes, coil winding, No. 3.  
Lathe, 9"x3" Shepard, speed.  
Lathe, 15"x6" Sidney, q. c. g.  
Lathes, 17"x8" R-L., q. c. g.  
Lathe, 18"x8" Cisco, q. c. g.  
Lathe, 20"x8" Am., q. c. g., chuck 2250  
Lathe, 18"x8" Lehman, q. c. g. t. a.

Lathe, 16"x10" Monarch, grd. hd., t. a.  
Lathe, 20"x10" Schellenbach, g. h. t. a.  
Lathe, 36"x64" Bridgford gun bor.  
Lathe, 20"x10" Sidney, q. c. g., t. a.  
Miller, No. 3-B Milwaukee, s. p. d.  
Miller, pl. No. 2 Cincinnati, cone.  
Miller, No. 0 Kempsmith univ.  
Miller, duplex Knight, table 64"x32".  
Motor, 1½ & 5 h. p. 1/60/110-220.  
Motor, 15 h. p., 3/60/220/870.  
Motor, 7½ h. p., 3/60/220/1800.  
Motor, 10 h. p. a. c., 3/60/220/1740.  
Motors, 20 & 50 h. p., 3/60/220/900.  
Motor, 20 h. p., 3/60/220/1800.  
Paperslitter, 15" Jacques, bench.  
Pipe machine, 4" Williams, m. d.  
Planers, 48x48x20", 3-heads, Gray.  
Planers, 33x33x10", 2-hds., W. & P.  
Planer, 20"x16"x45" New Haven.  
Planer, 22"x22"x5" Cincinnati, 1 hd.  
Press, No. 3A Bliss, adj. table.  
Press, No. 2 Harouth o. b. i., 16,000 lb.  
Press, No. 19 Bliss, o. b. i., plain.  
Press, No. 14 Robinson o. b. i., pl.  
Press, No. 1 Toledo o. b. i., pl. m. d.  
Press, No. 14 Stiles (Bliss) plain.  
Press, 52 Ferracute, punch.  
Press, punch type, United, 15,000 lb.  
Press, D. G. 62, Ferracute, s. s.  
Press, No. 3 Massillon, trimming.  
Presses, No. 87 Niagara, screw.  
Punch, 30" thrt., 1"x1" m. d., s. e.  
Punch, horiz., 1½x1"; 13" tht, m. d.  
Punch & shear, 36" Cleve, e. f. a. j.  
Punch, coping, steel plate, 13" thrt.  
36" die space, 2 holes 1"x1" m. d.  
Riveter, Allen jaw, 36" cap. 1½".  
Riveter, ½" Shuster rotary, belt.  
Rolls, bending, 10"x½" initial, d. e.  
Rolls, bending, 14"x½" pyramid, d. e.  
Saw, Newton, 62" blade, comb.  
Saw, Burke, 12" blade, capacity.  
Saw table, No. 280 F. & E., (wood).  
Screw mche., 10" P. & W. pl., w. fd.  
Shaper, 8" Pratt & Whitney.  
Shaper, 12" Springfield, crank.  
Shaper, 15" Kelly, crank, vise.  
Shaper, 16" American, b. g. crank.  
Shapers, 16" S. & M. American.  
Shaper, 26" Smith & Mills, b. g., cr.  
Shear, alligator, Canton 24", No. 4.  
Shears, foot, 36" and 62"x18 ga.  
Shear, rotary, 12" thrt., cap. 10 ga.  
Shear, rotary, No. 2 Niagara, hand.  
Shear, rotary bevel, ¾", m. d.  
Shear, squaring, 8"x14 ga. power.  
Shear, squar., 72"x14 ga. Niagara.  
Shear, squaring, 60"x14 ga. Canton.  
Turbo compres., Spencer 5400 c.f.m.  
Turbo-generator, 500 kw, 3/60/2300.  
Turret lathe, 13" Gisholt, 24" h. s.  
Turret lathe, 2"x24", Jones & L.  
Turret lathe, 18" Warner & Swasey  
Turret, vertical, 30" King s. p. d.

## USED AND REBUILT MACHINERY

### FOR SALE BY

**Mid-West Machine Tool & Supply Co.,**

**Davenport, Iowa**

Automatics, full, No. 00 Brown & S.  
Balancer, Gisholt dynamic.  
Boring mill, 42" Bullard New Era.  
Drill, No. 30 Natco.  
Grinders, No. 10 Brown & Sharpe.  
Grinder, 10"x32" Landis, a. p. d.  
Grinders, surface, No. 22, Heald.  
Hobber, Nos. 2, 12-B & C.

Lathe, No. 9 LeBlond multi-cut.  
Miller, No. 13-B B. & S., production.  
Miller, No. 3 Cincinnati plain.  
Miller, 30"x16" Ingersoll, 4 heads.  
Radials, 3' Morris, American, Cincinnati Bickford.  
Turret formers, Nos. 0 & 2 B. & S.

Partial list; send us your inquiries.

### FOR SALE BY

**Herman L. Winterer,**

**943-53 N. Front St., Philadelphia, Pa.**

#### LATHES.

43"x17' 4" Bement-Miles.  
37"x14" Johnson d. b. g., q. c. f., t. a.  
32"x12" Pittsburgh, heavy duty, q. c. g.  
27"x12" Bullard.

26"x11' Wickes, q. c. g.  
23"x10' Niles, q. c. g.  
19"x10' Draper, patent head,  
and many others.

#### TURRET LATHES.

34"x23" Pond, triangular pattern.  
32"x26" Pratt & Whitney, hollow hex.  
19"x7" Fay & Scott, back grd.  
No. 22 Garvin Monitor.  
14"x 4" Warner & Swasey.

No. 3 Foster sc. machines 1-5/16" wire feed, (2).  
14"x9" Cincinnati-Acme, wire feed.  
No. 4 B. & S., bar feed, all auto. fds.  
No. 2 Smurr & Kamen, wire fd., (5).

#### DRILL PRESSES.

48" Almond, sens. radial, post type.  
40" Barnes horizontal radial.

26" Aurora, sliding head.  
24" Foote-Burt heavy duty.

#### MILLING MACHINES.

No. 5 Cincinnati, table 9"x50".  
No. 5 Becker Brainard, vertical.  
No. 3 Brown & Sharpe, plain, cone type.  
No. 2 Hendey, q. c. g.

No. 3 Becker-Brainard, new model, q. c. g., vertical attachment.  
No. 3 Becker universal back geared, quick change geared.  
No. 1 Van Norman hand miller.

#### PLANERS.

48"x37"x9" Sellers, 2 heads.  
48"x48"x12" Gray, 2 heads.

48"x36"x14" Cincinnati, 4 heads.  
30"x30"x8" American, 1 head.

#### BORING MILLS.

42" Bullard, 2 swivel heads, (2).  
Boring mill, No. 1 Sellers hor. 34" bar.  
Boring mill, car wheel, 60" Newton.

Boring, drilling and milling machine, Bement-Miles horiz., 44" bar, 14' 6" bet. heads, with revolving table.

#### PIPE MACHINES.

4" & 8" Eaton, Cole & Burnham.

4" Armstrong, No. 00.

#### MISCELLANEOUS.

Arbor press, No. 3 Greenerd.  
Arbor press, No. 8 Greenerd, 36" bet. columns.  
Arbor press, 20 ton Weaver.  
Centering mche., 5" Whiton, dbl. sp.  
Centering machine, 4" Hendey, motor driven.  
Electric hoists.  
Gear shaper, No. 35 Fellows, straight and helical heads.  
Generator, No. 100 Oxweld acetyl.  
Grinder, 13"x5" Landis, universal.  
Grinder, No. 8 Diamond, double end, heavy type.  
Grinder, disc, No. 17 Besly.  
Grinders, double end electric.  
Hammers, 15, 25 & 40 lbs. Bradley helve.

Hammers, 60 lb. Bellefonte upright, 2.  
Presses, Waterbury-Farrel d. a., 24"-5" strokes, 28" bet. housings, auto. roller feed, with cut-off attach., wt. 26000 lbs., new, (3).  
Punch or gate shears, 72" Cleveland multiple, 15" throat.  
Punch presses, all sizes, (15).  
Riveter 3/16" Grant on column.  
Riveter, air, 6" gap Allen, cap. 1 1/2".  
Riveter, air, 6" gap. Allen, cap. 4".  
Saw, No. 6 Nutter & Barnes (2).  
Saw, Q. M. & S. No. 4-B universal, 33" blade.  
Shear, 8' Ohl, No. 20 ga.  
Slotter, 14" Niles.  
Tire press, hvd., 60-ton Defiance.  
Tooth rounding machine, S. & S.

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# USED AND REBUILT MACHINERY

## FOR SALE BY

West Penn Machinery Company

1208 House Building,

Pittsburgh, Pa.

Air comp., Bury, duplex, 815 c. f.  
Air comp., 6"x8" Gardner duplex.  
Air comp., Gardner, gas. 47 cu. ft.  
Automatic, No. 55 Nat. 4-spindle.  
Automatic, 24" Cleveland Model A.  
Bolt cutters, 14", 2", 24", 4" Landis.  
Bolt cutters, 12", 2" Landis, dbl. hd.  
Bolt cutters, 12", Landis, 3 hd., m. d.  
Boring mills, vertical, 30" to 16".  
Boring mill, 84" Bickford, m. d. 95% new  
Boring mill, horiz. 4-spdl., Newton.  
Brake, 6"x10 ga. Dreis & Krump.  
Brake, 8"x16 ga. Robinson-Pexto.  
Brake, 12"x4" Cincinnati, press.  
Brake, 5"x19 ga. press type.  
Brake, 10" 6" Ohl, 10 ga., press type.  
Bulldozer, No. 4 Williams & White.  
Bulldozer, Nos. 25 and 28 W. & W.  
Drills, 14" to 38".  
Drill, No. 2 Colburn.  
Drill, 2-sp. b. b. Elmore, 1/2", sens.  
Drill, mult., No. 5 Fox, 10-spindles.  
Drill, radial, 4" American, t. a., b. d.  
Drill, radial, 6" Prentice, s. p. d.  
Flanger, McCabe, 1/2" capacity.  
Forging machines, 1 1/2" to 5".  
Gear cutters, spur and bevel.  
Gear cutter, 48" Newark, b. d.  
Gear planer, 24" Gleason, bevel.  
Grinder, dbl., 11"x11", 220 v., 3-40.  
Grinder, 6"x32" P. & W. univ. b. d.  
Grinder, 10"x50" Norton, univ. b. d.  
Grinder, 12"x32" Landis, univ.  
Grinder, 12"x96" Norton, b. d.  
Grinder, No. 4 Begly, disc.  
Grinder, plain, 16"x72" Landis.  
Grinder, planer type, 51" Springfield.  
Grinder, surface, No. 16 Blanchard.  
Grinder, internal, No. 60 Head.  
Grinder, tool & cutter, No. 2 Cinti.  
Hammer, 65-lb. Champion, upright.  
Hammer, 80-lb. Bradley, cush. helve.  
Hammer, 100 lb. Bradley, upright.  
Hammer, 150-lb. Dupont, upright.  
Hammer, 200-lb. Bradley, upr. helve.  
Hammer, No. 2-B Naze.  
Hammer, No. 2-B Naze, m. d.  
Hammers, steam 600 lb. to 6000 lb.  
Hammer, 2500-lb. Bement, sgl. fr.  
Keyseater, No. 2 Mitts & Merrill.  
Lathes, 12" to 60".  
Lathe, 13"x48" South Bend, b. d.  
Lathe, 16"x6" Lodge & S. grd. hd.  
Lathe, 19"x12" Sidney, q. c. g.  
Lathe, 36"x30" American, b. d.  
Lathe, Lo-Swing 34"x60" Pittsburgh.  
Lathe, brass, 18"x6" Fox.  
Lathe, turret, 26" Libby.  
Lathe, turret, No. 4 W. & S.  
Miller, No. 25 Becker, plain.  
Miller, plain, No. 4 Cinti. 14" d. h.  
Miller, univ., No. 4 B. & S. 12" d. h.  
Miller, slab, 24"x20"x14" Ingersoll.  
Miller, vert. No. 5-C Becker, s. p. d.

Pipe machines, 2" to 12".  
Planer, 48"x42"x12" Cincinnati, 2 hds.  
Planer, 72"x72"x20" Bement-M., 4 hds.  
Planer, o. s., 48"x48"x14" D. H., m. d.  
Planer, rotary, 48" Niles, m. d.  
Press, hyd., 60-ton Watson-Stillman.  
Press, hyd., 50-ton Lourie.  
Press, No. 20 Bliss o. b. i.  
Press, No. 6 Bliss dbl. cr. 8" str.  
Press, geared, No. 34 Toledo.  
Press, No. 37 Bliss, s. a., 6" stroke.  
Press, No. 74 Bliss, s. a.  
Press, No. 80 Bliss, tie rod.  
Press, wheel, 150-ton Caldwell.  
Press, wheel, 400-ton Niles.  
Punch, hor., Cleveland, 1" thru 1".  
Punch No. 2 L. & A. 12" thr. arch jaw  
Punch No. 2 L. & A. 18" thr. arch jaw  
Punch No. 1 L. & A. 30" thr. 14"-1".  
Punch, No. 14 W. & W., d. e. 14"-1".  
Riveter, Hanna, 18" thr., 15" gap.  
Rolling mill, 18" Standard.  
Rolls, angle bend., 2"x2"x1/2" Bertsch.  
Rolls, a. b., 1-B Buffalo 3"x3"x1/2".  
Rolls, bending, 42"x14 ga. Bertsch.  
Rolls, bending, 64"x1/2" Cincinnati.  
Rolls, bending, 10"x1/2" Cleveland.  
Rolls, bending, 12"x1/2" Niles.  
Saw, cold, 24" Hunter high speed.  
Saw, cut-off, Yates double end, new.  
Saw, hack, No. 7 Atkins 8"x8".  
Saw, hack, 13"x16" Peerless, gap.  
Saw, hot, 54" Menta sliding frame.  
Sandslinger, 11' tractor type.  
Shaper, 16" Gould & Eberhardt.  
Shaper, 24" Stockbridge, b. d.  
Shaper, 24" Cincinnati, b. d.  
Shear, angle, L. & A., 6"x6"x1/2".  
Shear, alligator, Garrison, 1 1/2" sq.  
Shear, alligator, No. 5 Canton, 3" sq.  
Shear, alligator, United, 6"x6".  
Shear, bevel, Lennox 1/2".  
Shear, 20"x18" ga. Bliss power.  
Shear, squar. 36"x16 ga. Niagara.  
Shear, squar. 42"x3/16" Canton, b. d.  
Shear, plate, 48"x1/2" United, m. d.  
Shear, sq. 72"x14 ga. Bertsch, b. d.  
Shear, sq., 10"x3/16" W. & R., m. d.  
Shear, 10"x4" Bertsch, 15" throat.  
Shear, 10"x4" Morgan, 24" gap.  
Shear, 12"x14" ga. Peerless 95% new.  
Shear, plate, 10"x1/2" H. & J. No. 4, m. d.  
Shear, plate, No. 6 H. & J. 112"x1".  
Shear, plate, No. 7 H. & J. 144"x1 1/2".  
Shears, plate, United, 156"x4".  
Shear, rotary, No. 6 Quickwork.  
Straightening rolls, Brightman 1'-4"  
Straightening rolls, Poole, 36"x12 ga.  
Straight'r. 45" United, 16 ga. 13 rolls.  
Straightener, Nat. 60"x14 ga. 17 rolls.  
Straightener, beam, No. 4 H. & J. m. d.  
Swaging machine, 1" Langelier.  
Testing machine, 100,000 lbs.  
Welder, Gibb spot, 1/2", 32" thrt.

## USED AND REBUILT MACHINERY

### FOR SALE BY

**J. L. Lucas & Son, Inc.,** - - - **3 Fox St., Bridgeport, Conn.**

Just a few specials from our stock.

3—Drills, 4-spindle sensitive, each.....	\$100.
3—Lathes, 14"x6' Flather quick change, complete, each.....	300.
5—Millers, No. 2 Brown & Sharpe b. g., complete, each.....	275.
1—Planer, 22"x5' Gray, fine for tool room.....	250.
700—Nesting steel shop pans, new, 20x12x6½", each.....	1.
Any of these machines will be sent on receipt of one-third, balance on arrival.	
Automatic screw machines, presses, many good tools all described in our new list. What are you looking for?	

### FOR SALE BY

**Brown Machinery Co.,**

**2323 N. 9th St., St. Louis, Mo.**

Blowers, Nos. 3, 7 and 9 Sturtevant  
Buffer, Hisey 3 hp., 3-ph., 220 v.  
Drills, 21" C-O and Champion; 22"  
Barnes; 24" Cincinnati; 21" & 32"  
Mechanics.  
Gear hobber, G. & E. No. 1716.  
Grinders, emery, St. Louis & W.;  
large stock new at 50¢ disc.  
Grinders, disc, No. 6 Besly and 14  
Gardner; No. 202 Badger.  
Grinders, drill, W. & M.; American.  
Grinders, plain, 10x36" Norton;  
8x36" B. & S.; 12x36" Modern.  
Grinders, universal, Nos. 3 Ohio  
and 12 B. & S.  
Hammer, helve, 40 lb. Bradley.  
Lathes, 16" Monarch; 18" Monarch;  
Lodge & Shipley; Fay & Scott;  
26" Whitcomb-Blaisdell; 28" Put-  
nam; 30" American.

Lathes, turret, 16" Gisholt, Omar,  
Foster, J. & L.  
Lathes, No. 5A Potter & Johnston.  
Millers, No. 4 Hendey; No. 0½  
LeBlond.  
Planer, 42"x36"x10' Pond.  
Presses, arbor, No. 3 Atlas.  
Presses, L. & J. o. b. i., No. 6  
Niagara, geared.  
Presses, hydraulic, 36x72" Elmes.  
Press, hydraulic, Laurie 200 ton.  
Profilers, Putnam; Reed-Prentice.  
Punch & shear, No. 52 Beloit  
Riveter, ½" Adt.  
Shaper, 14" Barker 7" Rhodes.  
Shears, rotary splitting, No. 134  
Marshalltown 4" thrt.; ½" cap.;  
No. 13 Pettingell.  
Shear, sq., 52" Pexto, 18 ga.; power.  
Welders, spot, Agnew ½" capacity.

And many others. Write for list 130.

### FOR SALE BY

**The O'Brien Machinery Co.,**

**113 N. Third St., Philadelphia, Pa.**

Drill, 6' American univ. radial.  
Drill, 4' Fosdick plain radial, single  
pulley drive.  
Drill, 32" Aurora, motor driven.  
Drill, 30" Snyder sliding head.  
Gear cutter, 36" Becker-B. auto.  
Gear cutter 30" Whiton, belt.  
Grinders, 3 h. p., d. c., dbl. end, (5).  
Grinder, 12"x36" Pratt & W. surface.  
Grinder, 12"x36" Cincinnati univ.  
Grinder, 14"x36" Norton plain, belt.  
Grinder, No. 2 Norton universal.  
Hammer, 2000 lbs. Chambersburg,  
double frame, steam forging.  
Hammer, 1100 lb. N. B. P., sgl. fr.  
Hammer, 600 lb. Bement sgl. frame.  
Hammer, 100 lb. Beaudry belt.  
Lathe, 30"x30" Harrington.  
Lathe, 28"x26" L. & S., b. d., q. c. g.  
Lathe, 26"x30" Pond, with motor.  
Miller, Newton duplex, planer type,  
table 21"x12".  
Miller, No. 4 Brown & Sharpe plain.

Miller, No. 4 LeBlond h. d., plain.  
Milling mche., No. 3 Garvin duplex.  
Pipe machine, 2" Landis, belt.  
Pipe machines, Oster portable, gas,  
drive, all sizes.  
Pipe machines, 2", 4", 6", 8" & 12"  
Oster, Cox, Williams, Eaton-Cole  
& Burnham and Jarecki makes,  
belt or motor driven, comp. stock.  
Planer, 36"x36"x24", Bement, 4 hds.  
Planer, 36"x36"x12" Cincinnati, 2 hds.  
Press, No. 73½ Bliss trimming press.  
Press, No. 37 Niagara, 1100 lb. fly-  
wheel, solid back.  
Punch, No. 1½ H. & J. 20" thrt., ½x1  
Punch, 36" E. F. Cleveland 1½x1.  
Punch, Cady quick acting, cap. ½"x3".  
Rolls, 14" bending, belt, drop end,  
rolls 9½" and 8½".  
Saw, 16" Higeley cold, cap. 4".  
Saw, 30" Espen-Lucas, cap. 8".  
Shaper, 18" Cincinnati, one travel-  
ing head, 2 tables.

## USED AND REBUILT MACHINERY

### FOR SALE BY

**Badger-Packard Mchy. Co., 133-9 W. Water St., Milwaukee, Wis.**

Gear cutter, 36" G. & E. spur.....	\$350.	Press, No. 3 Toledo, o. b. i. ....	\$275.
Gear cutter, No. 36 B. & S. spur.....	450.	Press, No. 4 McDonald, o. b. i. ....	225.
Gear hobber, No. 2 Adams.....	600.	Press, No. 14 Stoll, o. b. i. ....	275.
Gear shaper, No. 6 Fellows.....	200.	Press, No. 472 s. s., dbl. crank.....	250.
Gear shaper, 24" Gleason bevel.....	200.	Press, No. 116-A horn.....	450.
Press, 50 ton Lourie hydraulic.....	300.	Press, No. 4 Adriance, o. b. i. ....	325.
Press, 50 ton Lourie hydraulic.....	275.	Press, No. 119½ Bliss, o. b. i. ....	300.
Press, 17 ton Elmes upr. hydr.....	350.	Screw machine, 2" Cleveland single spindle, automatic.....	200.
Press, No. 2 Stiles type.....	75.	Screw machine, No. 33 New Britain.....	600.
Press, No. 20-U Ryerson Stiles.....	100.		
Press, notching, 34x4½ flywheel.....	150.		
Press, No. 19 Bliss, o. b. i. ....	185.		

### FOR SALE BY

**Chas. Mollitor Machinery Co., 118-124 S. Clinton St., Chicago, Ill.**

#### MILLING MACHINES.

48" Niles.	No. 2 Rockford plain.
24" Bullard rapid production.	No. 1½ Brown & Sharpe plain.
No. 2B Kearney & Trecker univ., incl. vert. and slotting att.	No. 13 Garvin plain (2).
No. 3 Cincinnati plain.	Gooley & Edlund production.
No. 2 B. & S. plain, m. d., (3).	No. 4 Becker vertical.
No. 2 B. & S. plain.	Garvin duplex production.
No. 2B light Rockford universal, with vertical attachment.	2½" Binnse production.
	24"x8" Ingersoll plain production.
	Large variety smaller sizes.

#### LATHES.

36"x16" Bridgeford, grd. hd., q. c. g.	14"x8" Bradford q. c., taper.
26"x14" Davis, q. c. g.	13"x8" Pratt & Whitney q. c. g., taper, draw att., motor att.
26"x13" Wickes, semi-quick chg. gr.	16"x 6" Cincinnati, q. c., taper.
24"x12" Walcott, q. c. g.	15"x6" Whitcomb-Blaisdell, motor.
20"x10" Le Blond q. c. g., 3½" sp. hole.	14"x6" Le Blond taper, collets.
18"x10" Davis, q. c. g.	12"x8" Vernon q. c. g.
18"x8" Rahn-Larmon, motor drive.	
18"x8" Greaves-Klusman q. c. g.	

#### RADIALS AND DRILLS

36" Mueller gear box.	24" Aurora sliding head, t. a.
3" American sensitive.	20" Moline, No. 5 Morse taper.
24" Cincinnati sl. hd., t. a.	4-spindle Turner turret.
28" Snyder sliding head.	6-spindle Barnes, g. b., p. f.

#### PRESSES AND SHEARS

8" Toledo square shear, 3/16".	No. 5A Toledo.
5" steel sq. shear, 12 gauge.	No. 5 Consolidated.
52"x16" gap square shear.	No. 1 Consolidated.
1800 lb. W. & W. drop hammers.	No. 10 Robinson geared.
300 lb. Beaudry trip hammers.	

Large variety and sizes of rotary shears, headers, etc.

#### SHAPERS

24" P. & J. up and down feed.	16" Steptoe geared.
24" G. & E. up and down feed.	15" Hendey.
24" Gould & Eberhardt.	18" Smith & Mills.

#### SCREW MACHINES AND TURKET LATHES.

No. 4 W. & S., b. g., friction head.	No. 2 Brown & Sharpe semi-auto.
No. 2 Warner & Swasey.	No. 6 Warner & Swasey.
No. 2 W. & S. hollow hex. turret.	2½" Jones & Lamson.
No. 2, 1, 0 B. & S. formers.	½, ¾" Cleveland (5).

#### MISCELLANEOUS.

Bolt cutters, 1", 1½" Landis.	Keyseaters, Nos. 1 and 2 Davis.
Bolt cutters, ½"-1½" (3).	Tappers, ½" Garvin, Pratt & Whitney.
Keyseaters, Nos. 0 & 2 Becker.	

Large stock of lathes, punch presses, plain and universal grinders, 2½", 4" 5", 8", 10" power squaring shears, tappers, several hundred Warner & Swasey, Potter & Johnston, etc., box, boring tools etc.

## USED AND REBUILT MACHINERY

### FOR SALE BY

**J. Bleser Mfg. Co.,**

**16th & Madison Sts., Springfield, Illinois**

Grinder, Micro cylinder.  
Grinders, Landis Nos. 1½ & 2 univ.  
Lathe, Lodge & S. 36"x18", q. c.  
Lathe, Prentiss 25"x16", s. c. g.  
Lathe, Greaves-K., 16"x8", q. c. g.  
Pipe machines, 2", 4", 6", & 8".

Miller, Transit heavy duty.  
Millers, No. 3 Burke, Rockford.  
Screw machine, No. 4 Warner & S.  
Shapers, Smith & Mills, 16", 12".  
Shear, 1½ Canton alligator.  
Shear, Bertsch 10"x13 gauge.

### FOR SALE BY

**Lee Machinery Company, Inc.**

**6318 E. Jefferson Ave.,**

**Detroit, Michigan**

Arbor press, No. 6 Eames.  
Grinder, 6"x32" Norton.  
Grinder, No. 70 Heald internal.  
Grinder, No. 2 Brown & Sharpe universal.  
Mill, No. 1½ Brown & Sharpe plain.  
Punch press, No. 3 Rockford.

### FOR SALE BY

**Randle Machinery Co.,**

**1733 Powers St., Cincinnati, Ohio**

Air compressor, 4½x5 Worthington, f. v. \$100.  
Air compressor, 9x8 I-R, type ER-1.  
Bending rolls, 62"x3/16" Hadger.  
Bending rolls, 7½" H. & J.  
Bending rolls, 12"x1" H. & J.  
Bending rolls, 10 x3/16" New Doty.  
Bolt cutter, 4" Acme, m. d.  
Bolt cutter, 1½" Acme.  
Boring mill, 36" Bullard New Era.  
Boring mill, 42" King & Bullard.  
Boring mill, 60" Niles.  
Boring mill, 8' & 12' Betts.  
Boring mill, 72" Bullard.  
Boring mill, 96" Bickford.  
Brake, 4'x10 ga. Robinson.  
Brake, 8'x10 ga. Robinson, m. d.  
Brake, 10'x10 ga. D. & K.  
Drill, 4½" Morris plain m. d.  
Drill, 66" Bickford, belt drive.  
Drill, 6" American g. b.  
Gear cutter, No. 3 B. & S.  
Gear cutter, 36" Whiton.  
Gear hobber, No. 1 Adams.  
Gear hobber, No. 3 Farwell.  
Hack saw, 6x6, Racine or Peerless.  
Hammer, No. 7 Beaudry.  
Keyseater, Nos. 1 & 2 Davis.  
Keyseater, Nos. 2 & 3 M. & M.  
Keyseater, No. 0 Baker.  
Keyseater, No. 2½ Baker.  
Lathe, 16"x12" Rahn-Larmon, ser. AA  
Lathe, 16x12" South Bend, q. c.  
Lathe, 25x10" LeBlond, q. c.  
Lathe, 26"x12" Wickes q. c. & s. q. c.  
Lathe, 22"x14" CTRS American s. p. d.  
Lathe, 16"x8" Cisco q. c.  
Lathe, 24"x16" L. & S. q. c.

Lathe, 36"x26" Wickes semi-q. c.  
Lathe, 44"x22" Fifeild l. c.  
Lathe, 54"x27" Pond.  
Lathe, 36"x36" Bridgeford grd. head.  
Lathe, 42"x50" HSG, g. h.  
Miller, 12" Cincinnati mfg.  
Miller, No. 1½ Valley City plain.  
Miller, No. 2 B. & S. plain.  
Miller, No. 3 Cincinnati plain, s. p.  
Miller, No. 2 B. & S. universal.  
Miller, No. 4 Cincinnati universal.  
Miller, No. 6 Becker vertical.  
Press, No. 8-A Bliss.  
Press, No. 21 Bliss.  
Press, No. 6 Niagara.  
Planer, 24x24x 8' American, 2 heads.  
Planer, 48x48x14' Gray, 4 heads.  
Planer, 60x60x10' Pond, 3 heads.  
Planer, 54x54x18" N. B. P., 4 heads.  
Planer, 36x36x10' Powell, 2 heads.  
Planer, 72x72x20" Ridgeway, 4 hds.  
Pipe machine, 2" Jarecki.  
Pipe machine, 6" Bignall & Keeler.  
Pipe machine, 8" Eaton-Cole-Burn.  
Pipe machine, 4" Oster, m. d.  
Pipe machine, No. 5½ Merrill, b. d.  
Shaper, 14" and 18" Steptoe, plain.  
Shaper, 16" G. & S., plain, crank.  
Shaper, 18" Cincinnati b. g.  
Shaper, 24" Barker b. g.  
Shaper, 24" Queen City b. g.  
Squaring shear, 36"x18 ga. Niagara.  
Squaring shear, 96"x18 ga. Niagara.  
Squaring shear, 6"x10 ga. Bertsch.  
Squaring shear, 10"x10 ga. Ohl.  
Shear, U-83 L. & A. universal.  
Turret lathe, No. 2 F. & W.  
Wheel presses, 100, 150, 200 & 300 tons.

Also various other sizes and types. Send us your inquiries.

## USED AND REBUILT MACHINERY

### FOR SALE BY

Taylor-Hall Welding Corporation, 99 Hope Ave., Worcester, Mass.

#### WELDERS

##### SPOT

Federal 20 k. w.  
Thomson 10 k. w.  
National 20 k. w.  
Detroit 7½ k. w.  
Thomson 5 k. w. power driven.

##### BUTT

Toledo 7-C, foot operated.  
Thomson 2A.  
Toledo 10B  
Federal 11A.  
Thomson 20A vertical.

Every welder rebuilt and guaranteed.

### FOR SALE BY

Reliance Machinery Sales Company

1405 Brighton Road,

N. S. Pittsburgh, Pa.

Automatic, 2" Cleveland, model B.  
Automatics, ½" Cleveland s. s., (2).  
Automatic, ½" Gridley, cone drive.  
Automatic, ½" cone, m. d., latest type.  
Automatics, Nos. 52 & 53 Acme  
Bolt cutter, ½" Acme, class "A," 2-sp.  
Bolt cutter, 1½" Acme, double head.  
Bolt cutter, 2½" Acme, single head.  
Boring mill, D. & H., 3½" bar.  
Boring mill, Niles horiz., 4½" bar.  
Boring mill, 34" Rogers vert., 1 hd.  
Boring mill, 42" Bullard, 2 heads.  
Boring mills, 51" Bullard, 2 hds (2).  
Boring mill, 72" Colburn, 2 heads.  
Buffers, 10 h. p., 220-3-60-3600.  
Broach, No. 3 LaPointe.  
Centering mche., Cadillac dbl. end.  
Cutting-off machine, 6" Hurlburt-R.  
Drills, 20", 23", 25", 34", sliding head, back geared.  
Drills, 20" Barnes camel back.  
Drills, 24" Barnes camel back, t. a.  
Drills, 3" Cincinnati Bickford g. b. s., p. d.  
Drills, 3½" Dreses, m. d. 440 volts, 3 phase, 60 cycle, constant speed.  
Drills, 4" Fosdick, m. d. 440 volts, 3 phase, 60 cycle, constant speed.  
Drill, 3-spindle Taylor & Fenn, p. f.  
Drill, P. & W. multiple, 12-1" spdl.  
Drill, D-2 Colburn heavy duty, (2).  
Drill, No. 25 Foote-Burt hvy. duty.  
Drill, No. 25-36" Foote-B. hvy. duty.  
Gear cutter, No. 1 Bilton.  
Gear cutter, 40"x9" G. & E., s. p. d.  
Gear cutter, No. 12 Brown & Sharpe.  
Grinder, 5 h. p. U. S., 220-3-60.  
Grinder, Oliver drill, ½" cap., m. d.  
Grinder, No. 11 B. & S. plain.  
Grinder, 12"x24" Modern plain.  
Grinder, No. 1 Norton univ. cutter.  
Grinder, No. 2½ Bath universal.  
Grinder, No. 16 Besly, double disc.  
Grinder, No. 5 Springfield planer type.  
Hammer, No. 1AA HighSpeed, m. d.  
Hammer, 60 & 300 lb. Bradley upr.  
Keyseater, No. 3 Baker, cap. 3".  
Lathe, 12"x10" Davis tool rm., q. c. g.

Lathe, 14"-28" Fay & Scott gap.  
Lathe, 18"x10" W.-B., g. h., s. p. d.  
Lathe, 24"x12" Schumacher-H. q. c. g.  
Lathe, 27"x18" Reed, bargain.  
Lathe, 30"x12" Boye & Emmes, q. c. g.  
Lathe, 18" Libby turret, s. p. d.  
Lathe, 21" Gisholt turret, (2).  
Miller, No. 1 Knight, 6"x18".  
Miller, No. 2 Cincinnati plain.  
Miller, No. 3 Cincinnati plain, m. d.  
Miller, No. 4 Hendey plain, s. p. d.  
Miller, No. 2½ LeBlond univ., h. d.  
Miller, No. 5 Becker vertical.  
Pipe mche., E., C. & B., 2½" to 8".  
Pipe machine, Merrill, 2½" to 12".  
Press, No. 87 Niagara screw.  
Press, No. 15 Bliss o. b. i., flywheel.  
Press, No. 3 Adriance o. b. i., 3½" str.  
Press, No. 8 Standard, o. b. i.  
Press, No. 3½ Toledo, o. b. i.  
Press, No. 5 Toledo o. b. i., geared.  
Press, Ferracut DD2, o. b. i., cam.  
Presses, 3P Ferracut (3).  
Presses, Nos. 20 & 21 Bliss, new.  
Press, No. 75 Consolidated, flywheel.  
Press, No. 54 Toledo trimming, m. d.  
Planer, 24"x24"x8" Powell, 1 head.  
Planer, 30"x30"x8" Powell, 1 head.  
Planer, 33"x33"x12" Cincinnati, 2 hds.  
Planer, 48"x38"x12" Gray, 3 hds., m. d.  
Planer, 48"x48"x14" Betts, 3 heads.  
Planer, 96"x72"x42" N. B. P., m. d.  
Punch, Wickes, 48" thrt., cap. 1½"x1".  
Radial drill, 3" Mueller, g. b.  
Radial drill, 3" Taylor & Fenn sens.  
Radial drill, 6" Reed-Prentice, m. d.  
Seamers, Bliss, Leffer & Max Ams.  
Separator, Dings magnetic, b. d.  
Shaper, 14" Ohio single gear crank.  
Shaper, 14" Steptoe single gear crk.  
Shaper, 20" Averbek, b. g., g. b., s. p. d.  
Shaper, 24" G. & E. hi-duty, b. d.  
Shaper, 24" G. & E. hi-duty, m. d., 440 v., 3 ph., 60 cy. (2).  
Shear, H. & J. angle, 6"x6"x½".  
Shear, 10"x14 ga. Bertsch, b. d.  
Tapper, ½" Webster & Perks, 1-spdl.

Our warehouse is full of bargains. What have you for sale?

## USED AND REBUILT MACHINERY

### FOR SALE BY

**Syracuse Supply Company. 314 W. Fayette St., Syracuse, N. Y.**

Guaranteed NEW MACHINES in original crates at prices below list:

Grinder, No. 1 Bath universal.

Pipe machine, No. 79 Forbes.

Exceptional values in USED TOOLS:

Band saw, 36" Fox, tilting table.

Bolt threader, Acme 2-spindle, with

one head,  $\frac{1}{2}$ " capacity.

Drill, Barr 4-spindle, 8" overhang.

Drill press, 22" Prentice, rebuilt.

Grinder, Blount 1 $\frac{1}{2}$ "x14" wet tool, m. d.

Knife grinder, 30".

Lathe, 8x60 Fitchburg lo-swing.

Lathe, 26"x16" Cooper Bros., \$125.

Miller, No. 5 Becker vertical.

Millers, Wisconsin hand, (3).

Planer, 20"x30"x16" L. W. Pond.

Radial, 5' Pond.

Shaper, 30" Whipp, back geared.

Straightener, No. 24 Corey.

Radials, 5' Drees, single pulley

drive, gear box, (2).

Rip saw, No. 24 Powers, self feed,

power.

Screw machine, No. 24 Garvin.

Thread miller, No. 12 Lees Bradner.

Tilted turret, No. 6 Wood.

Turret lathes, No. 4 Foster, (2).

Turret lathe, No. 3 Cincinnati Acme.

Turret lathe, 24"x26" Pratt & Whitney.

Turret lathe, 21" Gisholt.

Turret lathe, 24" Steinle.

### FOR SALE BY

**Norton-Broadway Mchy. Co., Sixth & Baymiller Sts., Cincinnati, O.**

#### LATHES.

36"x20" Bradford, triple geared.

32"x19" Wickes, double b. g.

30"x16" American, q. c.

30"x14" Prentice q. c.

27"x14" Pond, q. c.

12-26"x14" Putnams, semi-quick.

24"x14" Lodge & Shipley, q. c.

28"x10" Boye & Emmes, q. c.

19"x10" LeBlond q. c.

20"x10" Bradford, loose change.

#### MILLING MACHINES.

No. 24 & 3 LeBlond plain.

No. 1 Oesterlein universal.

No. 3H LeBlond heavy duty, plain.

No. 6 Becker vertical.

No. 12 Brown & Sharpe plain.

No. 13 Brown & Sharpe, plain.

No. 4B Brown & Sharpe heavy duty.

No. 4 Cincinnati universal.

No. 4 Cincinnati vertical sgl. pul.

No. 3 Brown & Sharpe, vertical.

No. 12 Pratt & Whitney, Lincoln type

Owen two-spindle.

#### BORING MILLS.

24" Bullard New Era type, serial

11469.

36" Niles, 2 heads.

34" Bullard, 1 head.

42" Gisholt, 2 heads.

50" Niles, 2 heads.

6" Gray horizontal.

#### PLANERS.

24"x24"x6" Ohio.

24"x24"x 8" Pond, 2 heads.

24"x24"x 8" Putnam, 1 head.

32"x32"x 8" Gray, 2 heads.

30"x30"x 16" Gray, 2 heads.

32"x32"x16" Whitcomb, 2 heads.

48"x16" Detrick & Harvey, open side

48"x10" Belmer, 4 heads.

48"x16" Cincinnati, 4 heads.

24"x 8" Smith & Silk, 1 head.

Whitcomb crank planer.

#### DRILLS AND RADIALS

4-spindle Kokomo, 12" overhang.

3-spindle Henry & Wright, 7".

4-spindle Reed sensitive.

3-spindle Reed sensitive.

6-spindle Reed sensitive.

3' American single pulley, gear box.

3' Morris, single pulley, gear box.

34' Mueller, single pulley.

5' American, semi-univ., sgl. pulley.

5' universal, old style.

#### MISCELLANEOUS.

Air compressor, 600' Ingersoll, 2 stage

Bending brakes.

Bolt cutter, 2-sp. Acme 1 $\frac{1}{2}$ ".

Drill 25" Aurora, tapping att.

Gear hobber, Cincinnati.

Grinders, Nos. 4 & 120 Gardner disc.

Hack saw, 10" Massachusetts.

Hammer, Bradley helve.

Hammers, Bradley strap.

Presses, Toledo, Long & Allstater

& Losbough & Jordan inclinable.

Press, 50 ton Lucas forcing.

Press, 150 ton Caldwell wheel.

Punch and shear No. 3 H. & J. d. c.

Shears, 6' 8", 16" power.

Threading mche., Auto. Mch. Co.

Turret, No. 3-A Warner & Swasey.

serial 100,756.

More than 300 machines tools in stock.

# USED AND REBUILT MACHINERY

## FOR SALE BY

### Miles Machinery Co.,

Air compressor, 7"x6" Ingersoll-R.  
Automatics, 4, 14, 24, 24 Gridley.  
Buffer, 5 h. p. U. S. Elec. Tool.  
Crane, 5 ton Sprague a. c. motors.  
Drill, 26" Rockford, s. h. b. g. p. f. t. a.  
Drills, radial, 5', 6', & 8' Western.  
Drill, heavy duty, No. 314 Baker.  
Grinder, 12"x36" Cincinnati univ.  
Grinder, internal, Nos. 70 & 75 Heald  
Grinder, face, 84" Diamond.  
Hammer, steam, 600 lb. N.-B.-P.  
Keyseaters, Nos. 0, 1 & 2 Baker.  
Lathe, 36"x18" Schumacher-Boye.

### Saginaw, W. S., Mich.

Lathe, 26"x14" Putnam.  
Lathe, turret, 18" Libby, m. d.  
Lathe, turret, 36" Bullard vertical.  
Lathes, turret 21" and 24" Gisholt.  
Mill, boring, 72" Colburn.  
Mill, boring, 96" Betts.  
Miller, plain, Nos. 24, 3 & 4 LeBlond  
Miller, univ., No. 2A Brown & S.  
Miller, vert. No. 4 Cincinnati.  
Planer, 42"x42"x14" Gray, 4 heads.  
Planer, 48"x48"x10" Liberty 3 heads.  
Planer, 72"x72"x16" Pond, 4 heads.  
Shaper, 30" American toolroom.

## FOR SALE BY

### Strafer Machinery Company,

14th and Provost St.,

Jersey City, N. J.

### BORING MILLS.

10' Betts motor drive.  
14" Niles heavy, swing 15' 4".  
96" H. Bickford, cone drive.  
96" Cincinnati rapid traverse, m. d.  
60" N. B. P. motor drive.  
72" N. B. P. geared feed, cone type.  
Boring bars, Underwood, portable, 4"x8" with 12" heads \$200 each.

### DRILLS.

6" American motor on arm.  
5" N. B. P. semi-univ. s. p. d.  
44" Morris s. p. d.  
22" Barnes upright.  
6" Cincinnati Bickford s. p. d.  
6" Bickford cone type.  
32" Aurora upright.  
20" Prentice upright.

### GRINDERS.

18"x96" Norton plain, m. d.  
12x20 Fitchburg plain.  
14x72" Norton plain.  
8"x46" Morse plain, new.

### HAMMERS.

400 lb. Chambersburg self-contained.  
100-75-50 lb. Bradley compact.  
8000 lb. Chambersburg d. f. steam.  
1200 lb. Chambersburg board drop.

### LATHES.

40"x20" Pond blocks to 72"  
48"x18" Fiefield cone.  
18"x8" Fairbanks 3-step c., d. b. g.  
44"x34" N. B. P. g. h. m. d.  
22"x10" Drapier cone.  
18"x8" Fay Scott 3 s. e., d. b. g.

### MILLING MACHINES.

No. 4 Cin. h. p. rapid p. t.  
22"x10" slab miller.  
No. 2 Garvin hand miller.  
No. 2 Cincinnati vert., rapid p. t.  
No. 3 Pedrick & Ayers plain.  
No. 1 Brown & Sharpe belt feed.

### PIPE MACHINES.

6" Saunders, new dies, belt drive.  
8" Curtis & Curtis, price \$100.

### PLANERS.

120"x96"x30" Niles Bement Pond.  
35"x8" openside D. & H.  
48"x48"x16" openside D. & H.  
55"x56"x12" 4 h.

### PUNCHES AND SHEARS.

No. 3 H. & J. 36" t., double.  
Cleveland 24" t., cap. 1"x1".  
No. 4 H. & J. double 48" t.  
No. 3 H. & J. double angle.

### MISCELLANEOUS.

Centering machine, 3".  
Die slotter, Fox.  
Elevator, d. c. m., portable.  
Generator, 100 k. v. a. Diesel engine.  
Hoist, double drum, 10 h. p., a. c.  
Lathes, pattern makers.  
Miller, Burr spline.  
Roll, 8" capacity.  
Roll, 30" tinamith.  
Rotators, 5 and 10 ton.  
Saw, No. 1 Klem metal band.  
Ship augers, 500.  
Slotter, 24" Niles.  
Squaring shear, 10".  
Straightening rolls, H. & J. 1" cap.  
Straightener, wire core, to 5/16".  
Trucks, industrial storage battery.

# USED AND REBUILT MACHINERY

## FOR SALE BY

### United Mchry. & Supply Co.,

Compressor, Ingersoll 888' b. d.  
Drill, 2-spindle rail drill.  
Drill, Foote-Burt 3" spindle, a. p. d.  
Keyseater, for Woodruff keys.  
Lathe, Gisholt turret, 6" hole.  
Miller, No. 2 LeBlond plain.  
Resaw, band, 5" and a. c. motor.

### 1241 Walton St., St. Louis, Mo.

Rolls, corrugated, 42" b. d.  
Rolls, 8' and 6', belt drive.  
Saw, 45" Ryerson friction.  
Saw, 22" Espen-Lucas cold.  
Shear, 36"x8", power.  
Weider, Toledo butt, 30 k. v. a.,  
1" capacity.

## FOR SALE BY

### Asher Machinery Co.,

### 217 Centre St., New York, N. Y.

Automatic, No. 0 Brown & Sharpe, serial 1500.....	\$ 650.
Automatic, No. 2 Brown & Sharpe, serial 1500.....	700.
Grinder, No. 1 LeBlond, universal tool and cutter.....	300.
Grinder, No. 2 Brown & Sharpe universal, fully equipped.....	650.
Hammer, No. 0 DuPont, 25 lb., trip.....	290.
Lathe, 34x12, Lodge & Shipley triple b. g., latest type.....	1250.
Press, No. 6 Adriance, o. b. i., weight 5500 lbs.....	700.
Press, No. 21 Bliss, 3" stroke, latest type, new clutch.....	475.

## FOR SALE BY

### Davis Machinery Exchange,

### 1-3-5 So. St. Clair St., Toledo, Ohio

Aircompressor 4x5 Ingersoll-Rand.  
Air compressor, 6x6 Chicago pneumatic tank.  
Air comp., 8x6 Ingersoll-R. with t.  
Band saw, 10" Napier metal cutting.  
Band saw, 9" H. & R. metal cutting.  
Bolt threader, 1 1/2" Landis, sq. head.  
Bolt threaders, 1 1/2" and 2" National.  
Chucking machine., No. 33 New Britain automatic.  
Drill, Leland Gifford high speed, motor drive.  
Drill, 4-spindle Foote-Burt rail.  
Drill, 6-sp. Nat. Acme horizontal.  
Grinder, No. 1 Greenfield plain.  
Grinder, No. 10 Besly dbl. end disc.  
Grinder, 24" Diamond dbl. end disc.  
Grinder, No. 19 53" Besly vert. disc.  
Grinder, 8"x18" Ott.  
Grinder, No. 60 Heald cylinder.  
Grinder, No. 1 Fraser cylindrical.  
Grinder, No. 3 Landis univ. 12x42.  
Hack saw, 6"x6" Marvel power.  
Hammer, No. 1 1/2-B High Speed riveting, m. d.  
Keyseater, No. 0 Mitts & Merrill.  
Keyseater, No. 2 Davis.  
Keyseater, No. 2 Baker.  
Lathe, 14"x6" Monarch q. c. g., chuck  
Lathe, 16"x6" Monarch q. c. g., chuck  
Lathe, 18"x8" Sidney q. c. g., hvy. duty  
Lathe, 16"x8" Monarch q. c. g., chuck  
Lathe, 22"x9" National quick change geared, chuck, g. h., s. p. d.  
Lathe, 15"x10" American q. c. g., ck.  
Lathe, engine, 15"x7" Lehmann, q. c. g., chuck.  
Lathe, engine, 14"x8" Walcott, q. c. g., chuck.  
Lathe, 19"x14" LeBlond q. c. g., ck.  
Lathe, engine, 17"x8" Oliver, q. c. g. chuck.  
Lathe, engine, 24"x12" Greaves-K., l. c. g.  
Mill, No. 4-B Becker vert., c. pulley  
Mill, No. 3V Toledo vertical, s. p. d.  
Mill, No. 3-B B. & S. plain, s. p. d.  
Mill, No. 5 Becker vertical.  
Miller, Fox hand.  
Miller, No. 6 Whitney hand.  
Milling & drill, mch., No. 1 Knight.  
Milling & drill mche. No. 2 Knight.  
Press, arbor, No. 24 Atlas.  
Press, arbor, No. 3 Greenerd.  
Press, No. P1 Ferracute s. b.  
Press, No. P2 Ferracute s. b.  
Press, No. 4 Adriance o. b. i.  
Press, No. 17 Toledo deep throat.  
Screw machine, 1 1/2"-1 1/2" Cleveland automatic, model A.  
Shaper, 10" Gould & E. crank.  
Shaper, 16" Smith & Mills crank.  
Shaper, 16" American crank b. gr.  
Shaper, 20" Kelley crank, back grd.  
Shaper, 20" Mattison crank, b. g.  
Shaper, 21" Milwaukee crank, b. g.  
Shaper, 26" Smith & Mill crank, b. g.  
Shear, Lloyd Booth geared alligator, 12" blade.  
Shears, No. 142 Niagara pwr. square.  
Slitter, gang, No. 513 Toledo, 36"x15 gauge.  
Turret, lathe, No. 5 Foster, power feed to turret and cross-slide.  
Turret lathe, No. 7 Foster, power feed to turret and cross slide.  
Welder, Taylor spot, 80 k. w., 60 cy., 440 v.



## USED AND REBUILT MACHINERY

### FOR SALE BY

**E. L. Klauber Machinery Co., 320 South Third St., St. Louis, Mo.**

Bench drills, motor drive, 110 volt.  
Coil winding machine.  
Cut-off machine, Hurlbut-Rogers.  
Double seamers, Bliss Nos. 1 & 1½.  
Drill, 28" Prentice, b. g., p. f., sl. hd.  
Drills, 3-spindle Dwight slate.  
Drill press, 26" Superior b. g., sl. hd.  
Gear hobber, No. 0 Schuchardt & S.  
Gear miller, automatic, 4" cap.  
Grinder, No. 3 Brown & S. cutter.  
Grinders, Greenfield cutter & tool.  
Grinder, No. 2 Garvin hole.  
Grinder, belt and disc, Duplex-B.  
Grinders, electric bench, ½ h. p. 110 volt a. c.  
Lathe, bench, Stark, with collets.  
Lathes, 14x6 Davis tool room.

Lathe, 15x6 South Bend.  
Lathe, 16x6 Prentice p. c. g., s. b. g.  
Milling machine, Knight No. 1½.  
Milling machine, Knight No. 2.  
Pinion and wheel cutter, Stark.  
Planer, 30"x30"x8" American.  
Polishers, New Britain drop head.  
Polisher, St. L. No. 7, roller bearing.  
Presses, 30 ton Southwark, hydr.  
Punch and shear, No. 18 Williams & White.  
Screw mches, 3" Cleveland auto. (2).  
Screw machine, No. 53 National  
Acme four-spindle.  
Tapping machine, No. 6 St. Louis.  
Tapping machine, ½" Montgomery h. s.  
Tapping machine, No. 2 St. Louis.

### FOR SALE BY

**Wm. C. Johnson & Sons Machinery Co., 1211-1223 N. 12th St., St. Louis, Mo.**

#### DRILLS.

30" arm Gang radial.  
36" arm Drees radial.  
42" arm Morris radial.  
6' arm Niles radial.

20" Canedy-Otto.  
22" Barnes back geared.  
25" Barnes back geared.  
32" Prentice sliding head.

#### MILLERS.

No. 1 Kempsmith plain.  
No. 4 Brown & Sharpe universal.

No. 3 Rockford hand.  
Hendey, Lincoln.

#### LATHES.

15"x10' Cisco, q. c. g.  
16"x6' Monarch q. c. g.  
16"x10' Sidney, q. c. g.  
20"x14' Monarch, q. c. g.

24"x10' LeBlond.  
24"x12' Economy, q. c. g.  
50"x24' Niles-Bement-Pond.  
60"x12' New Haven turning.

#### PLANERS AND SHAPERS.

27"x27"x7' Smith & Silk.  
36"x36"x12' Cleveland openside.  
36"x30"x15' Hamilton.

20" Steptoe crank.  
24" Barker crank.

#### GRINDERS.

No. 4-20" Gardner, double disc.  
No. 50 Gardner disc, 30" capacity.

No. 6 Besly double disc.  
No. 10 Besly 18" double disc.

#### BORING MILLS.

10' Niles vertical, 2 heads.  
42" Niles, 2 heads.  
36" Gisholt turret head.

No. 1 P. & H. horizontal boring and drilling machine.

#### PIPE THREADING MACHINES.

1" to 4" Williams.

2½" to 6" Bignall & Keeler.

#### SCREW AND TURRET MACHINES.

3"x24" J. & L., geared head.  
3"x36" J. & L., geared head.  
No. 6 Warner & Swasey cone head.

3" Warner & Swasey hollow hex.  
No. 6-A Potter & Johnson (2).

#### TRAVELING CRANES.

10 hand cranes, 14' to 42' span.

3 yard jib cranes with guy ropes.

#### PUNCHES AND SHEARS

28" throat, capacity ½" in ½".  
No. 15 Williams-White, 20" throat.

No. 14½ Williams-White, double 12" throat.

#### MISCELLANEOUS.

Bulldozer, No. 3.  
Bulldozer, No. 9.  
Furnaces, cyanide hardening.  
Presses, 1,000 lb hydraulic, 20 & 30 ton

Punch, horizontal, 1" in 1".  
Shear, Lennox, rotary bevel.  
Swagger, No. 1 Dayton.

## USED AND REBUILT MACHINERY

### FOR SALE BY

**Foster Machinery Company, 2613 E. 73rd St., Cleveland, Ohio**

12"x14 ga. Loy & Nawrath. | SHEARS. | Canton alligator, cap. 14' sq.

MISCELLANEOUS.  
Band saw, 24" woodworking. | Punch & s. No. 2 Long & Alstatter.  
Drill, multiple - spindle Bausch, | Riveter, High Speed 2A.  
No. 3 Morse taper. | Welder, butt, 2" round.  
Punch press, No. 37 Swaine.

### FOR SALE BY

**Fitchburg Grinding Machine Corporation, Fitchburg, Mass.**

Putnam 14"x6'. | LATHES. | Perkins threading 21"x10".  
Greaves-Klusman 18"x8. | New Haven 32"x12".

PLANERS. | 17"x20"x8' Whitcomb.  
42"x36"x22' Whitcomb. | 30"x30"x8' Powell, 2 heads.  
32"x26"x16' Whitcomb, 2 heads.  
22"x22"x6' Whitcomb.

TURRET LATHES.  
3x26" J. & L. chuck equipment, | 24x26" Greenlee.  
double spindle. | 21" Gisholt.

MILLERS.  
No. 1 Steptoe. | BORING MILLS. | 24" Reed-Prentice.  
3"x24" Rockford.

### FOR SALE BY

**M. A. Wertman Machinery Co., 427 Penton Bldg., Cleveland, Ohio**

Automatic, Cleveland model A motor drive 3 1/2", 2" and 1 1/2" good as new.  
Automatic, New Britain No. 24 4-spindle chucking.

Brake, Robinson 8' 10 gauge power bending brake, new cond., never used.

Drill, American 5' radial, gear box single pulley, dr., good condition, cheap.

Drill, Henry & Wright 4-spindle, class K, 12" overhang, ball bearing, good

as new.

Drill, W. F. & J. Barnes 22 1/2" upright, back gear and power feed.

Drill, Snyder 28" sliding head, pump and piping, perfect mechanical cond.

Grinder, 6"x15" Fitchburg power feed.

Grinder, 10"x72" Landis self contained motor drive excellent condition.

Grinder, Baxter D. Whitney No. 23 cylinder grinder, complete, fine cond.

Hammer, 200 lb. Beaudry, fine condition, used very little.

Hammer, 500 lb. Bradley upright helve.

Lathe, 14"x6" Monarch q. c. g. pan bed (2).

Lathe, Sundstrand 9"x24" manufacturing, with back rest, motor drive.

Miller, Burr No. 5 keyseat milling machine 60" table feed, routing attach-

ment 90% new.

Milling machine, Garvin No. 2 duplex.

Milling machine, Ohio, No. 35 universal, complete equipment.

Milling machine, vertical, No. 3 Ingersoll single pulley drive.

Milling machine vertical attachment for No. 3 Kempsmith miller.

Planer, Cincinnati 36"x36"x16', three heads, motor drive.

Polishing lathe, U. S. Elec. 3 h. p. 220 volt d. c. polishing lathe.

Polishing lathes, Frankfort double end, b. b., 1 1/2" diam spindle (8).

Polishing machine, Blevney vertical belt polishing machine.

Saw, Ryerson No. 3 friction saw, a. c. motor extra saws, pwr. fd., fine cond.

Shear, Long & Alstatter No. 2 gate shear 3/16" capacity.

Thread miller, Coulter hob thread miller, very good condition.

Turret lathe, Warner & Swasey No. 4 g. h. f. universal with equipment bar

and chucking.

Turret lathe, Warner & Swasey No. 6 g. f. h. power feed, (2).

Turret lathe, Libby 18" heavy turret arr. motor drive.

## USED AND REBUILT MACHINERY

### FOR SALE BY

**W. H. Hobbs Supply Co.,** . . . . **Eau Claire, Wis.**

Engine lathe, 24"x16" Lodge & Shipley, quick change gears, compound rest, double back geared, 3-step cone, countershaft.

Planer, 41"x36" 18' widened patent spur gear, two heads on rail, two on side, power feed, splendid condition.

One hundred other machines—send for list.

### FOR SALE BY

**Segal & Goldsher, Inc.,** . . . **817 W. Lake St., Chicago, Ill.**

Blower, No. 5 Root.....	\$250.
Bolt cutter, National 1½" capacity, complete with dies.....	165.
Lathe, 20x11 Cisco quick change gear, taper attachment.....	650.
Lathe, 14x6 Sidney quick change gear.....	300.
Motor, 50 h. p. Allis-Chalmers, 3 phase, 440 volts.....	300.
Punch, Hilles-Jones horizontal, 8" throat.....	250.
Punch press, No. 1315 Phoenix, 4" stroke.....	225.

### FOR SALE BY

**McDonald Machinery Co.,** 1531-33 N. Broadway, St. Louis, Mo.

Arbor presses, Eames No. 6.  
 Bolt cutter, Acme single head, 1½".  
 Boring mill, Bickford 96", 2 heads.  
 Boring mills, 6 Buillard 42" low price.  
 Chain hoists, 1, 1½, 2 and 3-ton.  
 Demagnetizer, Walker.  
 Drill, Baush 18-spindle.  
 Drills, Baker, heavy duty (2).  
 Drills, Leland G-1-sp. h.s., b.b. floor.  
 Drills, Kokomo 1-spindle, Sipp 1 and 2 spdl., h. s., b. b.  
 Drills, 20", 24", 26 & 28" b. g., & tap.  
 Drill, American 3' Bickford 5' radials.  
 Gear hobber, Adams-Farwell No. 1.  
 Grinder, Modern 8"x30".  
 Grinders, Landis piston, motor driven, Landis cylinder. 90% new.  
 Grinder, Heald No. 60 cylinder.  
 Grinders, modern internal; Blount 30", wet (3), Heald 8", mag. ck.  
 Grinders, St. Louis No. 9.  
 Grinder, Reed-Prentice vert. surf., 2 chucks.  
 Grinder, Oakley No. 2 tool & cutter.  
 Hack saws, 4x4, 6x6 & 2 Racine Jrs.  
 Atkins 4x4; Atkins 8x8 h. s.; Marvel No. 2; Racine h. s.  
 Hammer, Bement-Niles 1100 lb. st.  
 Lathes, Bridgeford 36"x12", q. c. g.; American 30"x10" q. c. g., d. b. g.; L. & S. 36"x16" q. c. g., d. b. g.; Wickes 26"x12" q. c. g., d. b. g.; South Bend 24"x14"; Davis 22"x10"; Whitcomb-Blaisdell 22"x8" q. c. g.; Monarch 16"x8"; L. & S. 20"x10"; C. & J. 15"x8" all q. c. g.; 40 other assorted sizes.  
 Milling machines, Ohio No. 20 plain.  
 American No. 1½ universal. Ohio 34; LeBlond No. 3-H plain; Brown

& S. No. 3 plain; B. & S. No. 3 B pl., s. p. d.; American No. 1½ plain; Cincinnati No. 3 plain; Becker No. 23 plain.  
 Milling and drilling mchs., Knight No. 1½ with power feed.  
 Pipe machine, Curtis 3", motor dr.; Merrill 4" belt drive, Jarecki 2".  
 Planers, Gray 28"x28"x6", 1 head; Cincinnati 36"x36"x18" 3 heads; Pond, 36"x36"x12" table, 18" bed, 2 heads.  
 Patches, W. & W. No. 17 punch.  
 Punch presses, Swaine Nos. 27, 29, 31; 33; Ferracute No. 1 o. b. i., (2)  
 Federal Nos. 1, 2, 3; Toledo horn-ing press; Ferracute horning.  
 Pyrometer, Thwing elec., with rec.  
 Rolls, Badger 50" Pyramid power rolls, 5" dia., ½" cap.  
 Screw machine, Cleveland 2½" auto.; Gridley 4-sp. 1½" auto.; P. & W. No. 2½ hand; Foster No. 3 hand; Woods No. 3 tilted turret head; Bardons & O. No. 7; National-A. No. 52 auto., 4-sp., m. d.; Milholland b. g. hand; Foster No. 7 hd. b. g.  
 Shapers, American 16" b. g.; S. M. 16"; Barker 24" b. g. 24" Queen City 24" b. g.; Barker 18" b. g.; American 18" back grd.; American 20" b. g.; G. & E. 16", b. g.; Smith & Mills 29" b. g., s. p. gear box; Niles traveling head.  
 Shears, 60" thrt. rotary slitting, (2).  
 Shear, Marshalltown No. 134.  
 Tapping mch., Garvin No. 2X auto.  
 Threading machine, Webster & Perks 4-spindle.  
 Welders, butt, Federal, 1" rds.

## USED AND REBUILT MACHINERY

### FOR SALE BY

#### Bennett Machinery Co.,

30 Church St., New York City

Boring mill, 72" Betts, p. r. t.  
Boring mill, 60" Niles B. P.  
Boring mill, 42" Bullard, 2 heads.  
Boring machine, 3" bar, Lucas.  
Drill, 24" Weigel, belt drive.  
Drill, Henry & Wright, 1-spindle.  
Drilling and milling machines Nos.  
1 and 2 Knight.

Grinder, 14"x36" P. & W. vert. surf.  
Grinder, No. 2 Landis, univ.  
Grinder, No. 1 W. & M. univ. t. & c.  
Grinder, No. 60 Heald.  
Hack saw, 4 1/2" Goodell & Pratt.  
Keyseater, No. 1 Davis, 1/2"-1".  
Lathe, 45"x34" N. B. P., geared hd.  
Lathe, 26"x48"x14" McCabe, dbl. sp.  
Lathe, 25"x12" Boys & E., q. c., taper.  
Lathe, 26"x12" Greaves-Klusman.  
Lathe, 24"x33"x14" Pond, belt.  
Lathe, 24"x24" Schumacher-B., cone.  
Lathe, 21"x10" Sidney, new.  
Lathe, 18"x10" Monarch, q. c. g.  
Lathe, 20"x8" Whitcomb-B., q. c. g.  
Lathe, 18"x8" Whitcomb-B., q. c. g.  
Lathe, 16"-18"x8" L. & S., q. c. g.  
Lathe, 18"x8" Porter.  
Lathe, 14"x8" Porter.  
Lathe, 18"x8" Hendey, taper.

Lathe, 10"x4" Summit, screw cutting  
Lathe, gap, 28"x48"x12" Harrington.  
Lathe, gap, 17"x32"x8" Putnam.  
Lathe, turret, 14"x18", P. & W.  
Miller, No. 3 Becker vertical.  
Miller, No. 14-A Garvin plain.  
Miller, duplex, No. 14 Cochrane.  
Motor, 20 h. p. variable speed, d. c.  
Pipe machine, 8" E. C. & B., belt.  
Pipe machine, 8" Jarecki, motor.  
Pipe mch., 8" Saunders, belt dr.  
Pipe machine, 6" Saunders 2 1/2-6".  
Pipe machine, 6" Oster belt.  
Pipe machine, 4" E. C. & B., belt.  
Pipe machine, 3" Jarecki No. 7H.  
Planer, 30"x30"x10" Cincinnati, 2hds.  
Presses, kick, new, (2).  
Pump, 5 1/2"x8x7 Worthington, new.  
Punch, 24" L. & A. No. 4 s. e.  
Saw, cold 22" blade Gleim, 6" cap.  
Screw mch., Gridley auto., 14", 4-sp.  
Screw mch., tur., No. 6 W. & S., g. h.  
Shaper, 24" Hollingsworth cone.  
Shaper, 24" Hendey friction.  
Shaper, 20" Gould & Eberhardt.  
Shaper, 16" Gould & Eberhardt.  
Shaper, 16" Stockbridge, belt.  
Shear, 36" Niagara power.

### FOR SALE BY

#### Brownell Machinery Co.,

150 Pine St., Providence, R. I.

#### BORING MILLS.

42" Bullard vertical.

8' Prentice radial, s. p. d.

No. 11 B. & S. plain 4x30.  
No. 13 B. & S. universal and tool.  
No. 3 B. & S. cutter and reamer.  
No. 6 Diamond disc.

30"x20" Fitchburg.  
30"x10" American.  
24"x16" LeBlond.

#### DRILLS.

8' Prentice radial, s. p. d.

#### GRINDERS.

No. 1 B. & S. surface.  
Blake & Johnston surface.  
20" Whitney wet tool.  
14" Blount wet tool.

#### LATHES.

22"x20" Lodge & Shipley.  
14"x6" Hendey tie bar, taper, draw-in.

#### METAL CUTTING MACHINES.

No. 4 Marvel hack saw 6x6.  
No. 1 Marvel.

12" H. & R. metal cutting band saw.  
3" H. & R. cutting-off machine.

#### MILLING MACHINES.

No. 4-A Brown & Sharpe universal.  
No. 13-B B. & S. pl. manufacturing.

No. 12 B. & S. plain.  
No. 2 Van Norman duplex.

#### PLANERS.

24"x24"x6" Whitcomb second belt dr. | 17"x17"x4" Whitcomb spur gear.

#### SCREW MACHINES.

No. 0 B. & S. plain, wire feed.

3"x36" Jones & Lamson, flat turret.

#### SHAPERS

24" Hendey friction.  
16" Stockbridge, plain.

Boynnton & Plummer.

#### MISCELLANEOUS.

Blower, No. 8 Boland (2).  
Cornice brake, 4' double truss.  
Gear cutter, No. 3-H B. & S. 24x6.  
Gear cutter, No. 2 1/2 Bilton.

Reducing machine, Keller oscillating type T-1-281.  
Scales, jewelers.  
Woodworker, No. 110 Crescent univ.

## USED AND REBUILT MACHINERY

### FOR SALE BY

**Carlson Machinery Co., Inc.,** . . . **Davenport, Iowa**

Boring mill, No. 2 Rockford horiz	Miller, No. 1 Kempsmith pl., conedr.
Drill, $\frac{1}{2}$ " Sipp h. s., b. b.	Miller, No. 3 Rockford hand.
Grinder, 10x20 Landis universal.	Miller, Wisconsin hand.
Grinder, No. 10 Besly disc, 2 grd.	Planer, 16"x4' Hendey.
tables, ring wheel chuck.	Press, No. 2 Springfield straightening
Lathe, 7"x30" Dalton bench.	Press, 15 ton Lucas forcing.
Lathe, Rivet bench.	Riveter, $\frac{1}{2}$ " Grant.
Lathe, 13x5 Sheppard, geared head.	Turret lathe, No. 4 Warner &
Lathe, 16x8' Prentiss.	Swasey plain.
Lathe, 16x8 Hendey, yoke head.	Turret lathe, No. 3 Foster.

### FOR SALE BY

**D. R. Clarkson,** . . . **506 Temple Bldg., Rochester, N. Y.**

Boring mill, 72" Niles, two heads on rail.  
 Boring mill, 16' Niles, motor drive.  
 Compressor, Ingersoll-Rand, Imperial type XB-10, 599 ft. per minute.  
 Crane, 5 ton, 47' span, cage control, now operating.  
 Drill, No. 30 Natco, arranged for 46 spindles, has 30, tapping attach.  
 Gear generator, 15" Gleason.  
 Grinder, No. 8-20 Besly, discs, press, fan, etc.  
 Lathe, 23"x16' Pond, taper attachment.  
 Lathe, Niles axle lathe.  
 Lathe, (2) Betts axle lathe.  
 Miller, 24" Cincinnati automatic duplex, index table, vert. hd., used 3 mos.  
 Press, Stoll No. 6-68.  
 Press, Niles car wheel press.  
 Shear, Pettingell circle, 60" throat.  
 Turret lathe, 24" Gisholt.

### FOR SALE BY

**Clinton Machinery Co.,** 126-128 S. Clinton Street, Chicago, Ill.

#### MILLING MACHINES.

No. 1 $\frac{1}{2}$  American plain.  
 No. 1 Kempsmith univ. fully equipt.

No. 1 Dow plain.  
 No. 0 Steptoe hand.

#### LATHES.

16"x8' Fay & Egan semi-q. c. g.  
 14"x6' Davis draw-in and taper att.

14"x12' Monarch motor dr., grd. hd.  
 14"x6' Seneca Falls l. c. g.

#### SHAPERS

21" Milwaukee, b. g. crank.  
 24" American b. g. crank.

22" Ohio crank.  
 21" Smith & Mills b. g. crank.

#### PUNCH PRESSES.

No. 4 Consolidated o. b. i. 4" stroke.  
 No. 4 Toledo o. b. i.  
 No. 61 Bliss s. s. reducing.  
 No. 58 Bliss s. s. reducing.  
 No. 3 Consolidated o. b. i.  
 No. 3 Rockford o. b. i.

No. 33 Swaine o. b. i.  
 No. 42 Toledo horning 4" stroke.  
 No. 15 Torris-Wold o. b. i.  
 No. 4 Cleveland o. b. i.  
 No. 19 Bliss o. b. i. (4).  
 No. 1 Rockford o. b. i.

#### DRILL PRESSES AND RADIAL DRILLS.

3-sp. Henry & Wright b. b. h. s. (2).  
 3-spindle Reed-Prentice b. b. h. s.  
 23" Superior s. h. b. g. p. f. 98 $\frac{1}{2}$  new.  
 26" Barnes camel back.

24" Aurora s. h. b. g. p. f.  
 3' Wisconsin ball bearing sensitive.  
 2-spindle Hoefler 20" gang drills.  
 No. 1 Knight milling and drilling.

#### MISCELLANEOUS.

Arbor press, No. 5 Atlas.  
 Bolt cutter, 1" Landis.  
 Bolt cutter,  $\frac{1}{2}$ " Acme.  
 Grinder, 6"x32" Norton.  
 Grinders, No. 1 LaSalle surface (3).  
 Grinder, 3x18 Norton self-cont.

Grinder, Dauber-Kratsch t. & c.  
 Hack saw, 9x9 Peerless power.  
 Hack saw, 6x6 Peerless power.  
 Hammers, Nos. 1 $\frac{1}{2}$ B, 3A, and 4A  
 High Speed.  
 Oil separators, Nos. 1 & 2 American.

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Boiler, 170 h. p. Heine longitudinal drum, H type, 150 lbs. pressure.  
 Drill, 3' Wisconsin high speed sensitive radial, tapping attachment, swinging table, finished T slot base, new..... \$ 600.  
 Drill press, 5' Drees full universal radial, with m. d. and motor, new... 2,900.  
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 Shaper, 16" Walcott crank, hollow ram..... 325.  
 Turret, 1½"x18" Pratt & Whitney.

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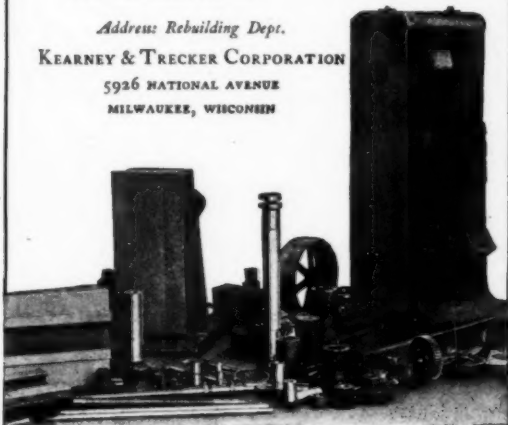
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No. 1½ B. & S. plain cone head.  
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No. 28 Ohio plain, cone head.  
Gooley & Edlund Lincoln type.

No. 1½ B. & S. universal, cone head.  
No. 1 Kempsmith univ. cone head.  
No. 2 Kempsmith univ. cone head.  
No. 3 Kempsmith univ. cone head.

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11"x4' & 6' Star Lathes (new).  
12"x5' Hendey, q. c., taper att.  
14"x8' Hendey, cone and g. h.  
14"x6' American, q. c. taper att.  
14"x6' Rockford, q. c., (new).  
14"x6' Flather, q. c.  
16"x8' South Bend, plain chuck.  
16"x8' Advance, q. c.

16"x8' Rockford, q. c., (new).  
16"x8' Cincinnati, q. c.  
18"x7' Lehman, quick change.  
18"x8' Reed quick change.  
20"x10' American quick change.  
24"x10' Boye & Emmes, q. c., (new).  
24"x16' Boye & Emmes, pl. ch.  
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New and Used 1, 2, 3 & 4 spindles  
Allen b. b. drills.

3-spindle Avey ball bearing.  
1 & 2 spds. Leland-G. Light Duty.

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3½' Bickford Radial, sgl. pulley dr.  
20" Barnes all geared.  
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24" Superior stationary head.  
25" Barnes, stationary head.

No. 13 Pratt & Whitney, 16-sp.  
3-sp. Hoefler stationary head.  
No. 2 Colburn, Heavy Duty.  
2-sp. Colburn No. 2, Hy. Dy.

### SHAPERS

14" and 16" Smith & Mills.  
16" Columbia, single pulley (new).  
16" Barker cone.  
16" Rockford, cone.  
16" Gould & Eberhardt, sgl. pulley.

16" Gould & Eberhardt cone.  
20" Columbia, single pulley, (new).  
20" Gould & Eberhardt, cone.  
24" Gould & Eberhardt, cone.  
24" Columbia, single pulley (new).

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Bridgeport 110" Knife grinder.  
Gisholt tool grinder.  
Diamond Tool & Surface Grinder.

10"x36" Thompson Univ. T. & C.  
Large assortment plain wet and dry  
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No. 4 Bardons & Oliver, P. F. with  
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1½"x9' Acme, P. F.  
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### MISCELLANEOUS

1½" Landis Bolt Cutter.  
8" Landis pipe machine.  
4" Oster, (new).  
Napier 10" Band Saws  
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No. 3 Reynolds Screw Driver.  
No. 12 Barber-Colman Gear Hob.

No. 6-36" Fellows Gear Generator.  
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New Federal Presses, all sizes.  
68N Bliss Double Action.  
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- 36"x18" Fifeild Engine Lathe.
- 30"x18" LeBlond, 5 S. C. Q. C.
- 36"x60"x12" Harrington Lathe.
- 24"x12" Draper Engine Lathe.
- 26"x12" Putnam Q. C.
- 21"x10" LeBlond h. d., late type.
- 25"x10" LeBlond. Q. C. late type.
- 20"x8" Hendey, yoke head, t. a.
- 18"x8" American, Q. C. Cone drive.
- 18"x 8" Rahn-Larmon Q.C. late type.
- 16"x8" Cincinnati late type, Q. C.

## Grinders

- No. 70 Heald Grinder.
- No. 60 Heald, \$275.00 each.
- 10"x20" Landis.
- 10"x52" Landis, self contained, 95% new.
- 16"x72" Landis crankshaft.
- No. 2 Oakley univ. tool grinder.
- No. 1 LeBlond Tool Grinder.
- Modern Chaser Grinder.
- Yankee Drill and Tool Grinder.

## Milling Machines

- No. 4 LeBlond Plain Miller.
- No. 3 Cincinnati univ., cone drive.
- No. 3-H LeBlond Pl. Miller, latest type
- No. 2 Kemp Smith, Universal.
- No. 1 1/2 Valley City.
- No. 3 Brown & Sharpe.

## Radial and Upright Drills

- 4" Bickford, Gear Box, S. P. D.
- 26" Barnes, latest, tap. att.
- 26" Cincinnati Upright, C. D.
- 26" Rockford Upright, C. D.
- 25" Superior Upright, C. D.
- 6-spindle Rockford 20" B. G. P. F.
- 20" Barnes camel back.

## Shapers

- 15" Springfield, cone drive.
- 20" Hendey.
- 20" Ohio Crank Shaper.
- 20" Steptoe B. G. Crank Shaper.
- 24" Steptoe B. G. Crank Shaper.
- 24" Smith & Mills B. G. Crk. Shaper.
- 28" Queen City, S. P. D.

**48x48x16' Detrick & Harvey Openside Planer, excellent condition....\$2,750.00**

## Gear Cutters

- 60" Brown & Sharpe Gear Cutter.
- 36" Brown & Sharpe Gear Cutter.
- 36" Whiton Bevel & Spur Gr. Cutter.
- 18" Schuchardt & Schutte Hobbers.

## Boring Mills

- No. 1 Rockford, 2" bar.
- 30" Colburn, Vertical.
- 24" Bullard Rapid Prod., latest type.
- 36" Bullard vert., 2 heads.
- 42" Gisholt, two heads, late type.

## Planers

- 16x16x36" Pratt & Whitney Planer.
- 42"x36"x12" Cincinnati, 2 heads.
- 32"x32"x12" Ohio, 2 heads.
- 24"x24"x12" Chandler, 2 heads.
- 48"x48"x16" D. & H. Opens. 2 hds.

## Miscellaneous

- 1" National Bolt Cutter, complete.
- 1 1/2" Acme double spindle Stay Bolt Cutter, with Landis Heads.
- No. 2 Kane & Roach Multiple P. & S.
- 100 lb. Little Giant Hammer.
- 50 lb. Little Giant Hammer.
- No. 2 Mitts & Merrill Keyseater.
- No. 0 Baker Keyseater.
- No. 2 Baker Keyseater.
- Whiting Punch & Shear, No. 8, 36" throat, 1 1/4"x1 1/4".
- Wicks Punch & Shear, 48" throat, 1 1/2"x1 1/2".
- No. 8 Long & A. Punch & Shear.
- No. 1 Badger State Alligator Shear.
- 10' Bertsch Power Squaring Shear, 14 gauge.

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# Bath's Guarantee

## Bolt and Nut and Forging Machinery

- ¾" and 1" Ajax steel bed upsetters.
- 2" Ajax steel bed upsetter.
- 2½" Ajax iron bed upsetter geared, with side shear.
- 3" Acme steel bed upsetter.
- 4" Ajax steel bed upsetter, geared, with side shear.
- 5/16" Waterbury D. S. O. D cold header.
- 1" 4-spindle Acme automatic nut tapper.
- 6-spindle Acme semi-automatic nut tapper ½" capacity.
- 6-spindle Acme semi-automatic nut tapper 1" cap.
- 8-spindle National semi-automatic nut tapper, 1" capacity.
- 1½" Landis triple head bolt cutter.
- Landis double head bolt cutter, 1¼" capacity.
- ¾" Sleeper-Hartley wire former, 4 slide.
- 4-slide Baird ¼" wire forming machines.
- ¾" and 1½" Schuster wire straightening machines.
- No. 1 Williams & White bulldozer.

## Boring Mills—Horizontal

- 2½" bar Cleveland, table type.
- 4" bar Niles-Bement-Pond, table type.
- 3¼" bar P. & H. motor drive.
- 4" bar Detrick & Harvey, floor type.
- 4½" bar Niles floor type.

## Boring Mills—Vertical

- 44" Baush, 2 heads, belt drive.
- 48" Colburn, 2 heads, arranged motor drive.
- 51" Niles-Bement-Pond, single pulley drive.
- 16" Niles, two heads.
- 10" Betts, heavy duty, motor drive (2).
- 12" Betts, heavy duty, motor drive.
- 10"—16" Bement-Miles, with extension head.
- 10"—16" Niles, 2 heads, friction feed.
- 16"—24" Niles with central extension head.

## Drills

- 4" Hammond sensitive radials with tapping attachment.
- 4" Prentice radial, motor drive.
- 5" Bickford radial, gear box.
- 6" Pond radial, belt drive.
- 7" American triple purpose radial.
- 4-spindle Foote-Burt.
- 4-spindle Moline rail drill, 2" capacity.
- No. 310 Baker, heavy duty.
- No. 25 Foote-Burt heavy duty, 3" capacity.

## Hammers

- 100-lb. Bradley, horizontal helve.
- 200 lb. Bradley upright helve hammer.
- 1100-lb. Chambersburg, steam, single frame.

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20"x7"x18" Oesterlein plain, belt drive.  
No. 0 Rockford, plain, table 30"x7½".  
No. 4 Cincinnati vertical, hi power  
No. 2-B heavy Brown & Sharpe, S. P. D.  
No. 34 Ohio plain, cone drive.  
No. 2 Baker Bros. keyseater, 2" cap. automatic feed.

## Planers and Shapers

36"x36"x14' Gray, 2 heads, belt drive.  
42"x42"x14' Detrick & Harvey openside planer with reversing motor drive.  
48"x60"x16' Detrick & Harvey, openside.  
96"x96"x16' Pond, 4 heads, belt drive.  
24" Queen City Shapers.  
20" Smith & Mills crank shaper.  
60" Morton draw cut shaper.

## Punches and Shears

48" throat Bement-Miles, arch. jaw, 1¼"x1".  
2" Garrison steel bed alligator shear.  
¾" Niagara circle shear.  
½" Lennox rotary shear.  
¾" Lennox rotary bevel shear.  
10"x½" Hilles & Jones squaring shear.

## Slotters

6" Pratt & Whitney slotter.  
20" Bement crank, cone drive.  
36" Bement crank.  
48" Niles-Bement-Pond, motor drive.

## Turret Lathes and Screw Machines

No. 1-B Foster, universal, geared head.  
3"x36" Jones & Lamson, geared head.  
18" Libby turret lathe, geared head.  
24" Gisholt, cone drive.

## MISCELLANEOUS

6"x6" Ingersoll-Rand air compressor.  
AJAX reclaiming rolls.  
400-ton Niles wheel press, 96".  
12"x72" Norton plain grinder, arranged motor drive.  
18"x8" Prentice geared head lathe.  
36"x14" Schumacher & Boye lathe.  
16"x6" Pratt & Whitney tool room lathe with taper attachment.  
36"x20" Allen riveter, ¾" capacity.  
8" Merrill pipe machine.  
Nos. 1 and 2 Buffalo Forge blowers.

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# REAL VALUES

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7<sup>1</sup> Fosdick Plain Radial, g. b. d.  
6<sup>1</sup> American Tr. Crd. Pl. Radial, g. b. d.  
5<sup>1</sup> American Tool Wks. t. g. Pl., g. b. d.  
4<sup>1</sup> American Triple Geared Plain Radial, g. b. d. (3).  
4<sup>1</sup> Dresser H. D. Plain, g. b. d.  
3<sup>1</sup>/<sub>2</sub><sup>1</sup> Mueller Plain Radial, gear box drive.  
4<sup>1</sup> Carlton b. b. Sensitive, tapping attach.  
4<sup>1</sup> Hammond b. b. Sens. Radial.  
3<sup>1</sup> American Sens. b. b. Radial, tap. att.  
2<sup>1</sup>/<sub>2</sub><sup>1</sup> Carlton b. b. Sens. Radial, t. a.  
No. 1 W. F. & John Barnes Horizontal.  
34<sup>1</sup> & 28<sup>1</sup> W. F. & J. Barnes Up., latest.  
28<sup>1</sup> Aurora Upright, latest type.  
28<sup>1</sup> Cincinnati Bickford Upright Drill.  
26<sup>1</sup> W. F. & J. Barnes Up., t. a., late.  
28<sup>1</sup> Reed-Prentice Upright.  
36<sup>1</sup> Aurora Upright Drill, tapping att.  
26<sup>1</sup> Barnes ALL GEARED.  
25<sup>1</sup> Snyder Upright Drill.  
24<sup>1</sup> Cincinnati Bickford Upright.  
24<sup>1</sup> Milwaukee Upright Drill.  
22<sup>1</sup> W. F. & J. Barnes Upright, t. a.  
21<sup>1</sup> Cinti. Bickford Upright, t. a.

21<sup>1</sup> Superior (Kokomo Hi-Speed) Upr.  
22<sup>1</sup> W. F. & J. Barnes 4-spindle Gang.  
22<sup>1</sup>/<sub>2</sub><sup>1</sup> W. F. & John Barnes 4-spdl. Gang.  
3-spindle W. F. & J. Barnes Gang 26<sup>1</sup>.  
6-spindle 21<sup>1</sup> Hoefer Gang.  
3-spindle 22<sup>1</sup> Hoefer Gang Drill.  
6-spindle Acme Horiz. Auto. Drill.  
Allen 1, 2 & 3-spdl. b. b., No. 2 M. T.  
No. 17 Foote-Burte 3-spdl. hvy. duty.  
Leland Gifford spl. spdl., b. b., No. 1 M. T.  
Avey 2-sp. b. b., No. 2 Morse Taper.  
Henry & Wright 2-sp. b. b., No. 2 M. T.  
Demco 3-sp. b. b., p. f., No. 2 M. T.  
Cleveland 4-sp., b. b., No. 2 M. T.  
No. 2 Colburn 4-sp. Mfg., hvy. duty.  
No. 2 Colburn Mfg. type, heavy duty.  
No. 12 Pratt & W. Multiple, 8 spindle.  
No. 0 Fox Multiple, 4-spindles.  
No. 1 Fox Mult., equipped with 6 spdl.  
No. 3 Fox Mult., equipped 8 spindles.  
No. 3 Bausch Mult., equip. 19-spdl.  
No. 11 P. & W. Mult., equip. 4-spdl.  
No. 37 Natco Multiple, 14-spindles.

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32<sup>1</sup>x26<sup>1</sup> Pond standard change.  
36<sup>1</sup>x22<sup>1</sup> Springfield tr. grd., stan. ch.  
36<sup>1</sup>x18<sup>1</sup> Lodge & Shipley q. c.  
30<sup>1</sup>x16<sup>1</sup> N-B-P stand. change, late types.  
30<sup>1</sup>x17<sup>1</sup> American grd. hd., q. c.  
28<sup>1</sup>x18<sup>1</sup> Schumacher & B. q. c., t. a.  
24<sup>1</sup>x16<sup>1</sup> L. & S. s. a. h., q. c., t. a.  
26<sup>1</sup>x14<sup>1</sup> Gleason standard change, t. a.  
26<sup>1</sup>x12<sup>1</sup> Pittsburgh q. c.  
24<sup>1</sup>x12<sup>1</sup> American Tool Wks. q. c.  
30<sup>1</sup>x14<sup>1</sup> Lodge & Shipley, q. c.  
24<sup>1</sup>x10<sup>1</sup> G. & K. q. c.  
24<sup>1</sup>x10<sup>1</sup> Boye & Emmes q. c. Lathe.  
22<sup>1</sup>x12<sup>1</sup> Whitcomb-Blaindell semi-q. chg.  
20<sup>1</sup>x11<sup>1</sup> Chard q. c. taper attach.  
20<sup>1</sup>x10<sup>1</sup> LeBlond q. c., taper att.  
19<sup>1</sup>x10<sup>1</sup> LeBlond quick change.  
18<sup>1</sup>x10<sup>1</sup> S-B. & E. q. c., taper att.  
16<sup>1</sup>x10<sup>1</sup> Monarch q. c., taper att.  
18<sup>1</sup>x14<sup>1</sup> Johnson q. h., q. c., taper att.  
18<sup>1</sup>x8<sup>1</sup> Monarch quick change.  
18<sup>1</sup>x8<sup>1</sup> LeBlond q. c. Lathe.  
18<sup>1</sup>x8<sup>1</sup> Boye & Emmes quick change.  
16<sup>1</sup>x8<sup>1</sup> Rockford, q. c.  
16<sup>1</sup>x8<sup>1</sup> Schumacher & Boye, q. c.

16<sup>1</sup>x6<sup>1</sup> LeBlond quick change.  
16<sup>1</sup>x6<sup>1</sup> Cincinnati quick change.  
16<sup>1</sup>x6<sup>1</sup> Lodge & Shipley q. c.  
16<sup>1</sup>x 6<sup>1</sup> Monarch quick change Lathe.  
14<sup>1</sup>x6<sup>1</sup> Reed-Prentice, grd. hd., q. c.  
14<sup>1</sup>x6<sup>1</sup> LeBlond grd. hd., q. c., late.  
21<sup>1</sup>x10<sup>1</sup> LeBlond Rapid Production  
Mfg. with 4-way turret tool post.  
17<sup>1</sup>x5<sup>1</sup> LeBlond Rap. Prod. Mfg.  
9<sup>1</sup>x14<sup>1</sup> Porter-Cable Mfg., late.  
Nos. 6 & 9 LeBlond Multi-Cut Lathes.  
No. 1-B Foster Univ. Turret, air chucks.  
18<sup>1</sup> Libby type A turret, 3<sup>1</sup>/<sub>2</sub><sup>1</sup> sp. hole.  
3<sup>1</sup>/<sub>2</sub><sup>1</sup>x40<sup>1</sup> Greenlee Flat Tur., bar equip.  
2<sup>1</sup>/<sub>4</sub><sup>1</sup>x24<sup>1</sup> Acme Flat Turret, chuck.  
3<sup>1</sup>/<sub>2</sub><sup>1</sup>x36<sup>1</sup> J. & L. Turret, chuck equip.  
3<sup>1</sup>/<sub>2</sub><sup>1</sup>x36<sup>1</sup> J. & L. dbl. sp. Turret, late.  
24<sup>1</sup> Gisholt Turret, t. a., late type.  
21<sup>1</sup> Gisholt Turret, late type.  
No. 4 Milholland Turret, geared head.  
No. 2 Foster Turret.  
No. 2 Milholland Turret.  
Nos. 2, 4, 6 Warner & S. Turret.  
Nos. 2 & 4 Bardons & O. Turret lathes.

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No. 5-A Lees-Bradner Gear Hobber.  
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No. 3-26" Cinti. Auto. Spur Gr. Cut.  
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8" Heald Grinder & Surf., style 200.  
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Capital Internal, collet attachment.  
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No. 20 Gardner Combination Disc.  
No. 120 Gardner Double Disc.  
No. 41, 20" Besly Disc, m. d.  
No. 10-18" & No. 14-30" Besly Disc.  
Walker single stroke Vertical Surface,  
10" dia. magnetic chuck.  
No. 120 Gardner Combination Disc.  
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Oliver Drill Point Grinder, m. d.  
6"x32", 10"x24" & 10"x36" Norton Pl.  
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10"x52" Landis Pl. Self-Contained.  
8"x30" Modern Plain, self-contained.  
No. 2-12"x36" Cincinnati Pl. 95% new  
No. 3 Brown & Sharpe Universal.  
Gisholt Universal Tool Grinder.  
No. 3 B. & S. Univ. Cut. & Reamer,  
No. 2 Oakley Univ. Tool & Cutter.  
P. & W. Thread Milling Cutter.

## SHAPERS AND PLANERS

32" Cincinnati h. d., b. g., Crank.  
26" Kelly Hvy. Duty, b. g., Crank.  
24" Steptoe h. d., b. g., Crank.  
24" Steptoe Triple Geared.  
24" Walcott H. D., B. G. Crank,  
helical gears.  
20" & 16" G. & E. h. d., b. g., Crank.  
20" Cincinnati h. d., b. g., Crank.  
24" & 16" Barker h. d., b. g., Crank.

16" Kelly hvy. duty b. g. Crank.  
15" Pratt & Whitney Crank.  
15" Hendey fric. grd. Shaper.  
14" Davis Machine Co. Crank.  
15" Potter & J. Univ. Crank, rev. tbl.  
60"x60"x18" D. & H. Openside, 3 hds.  
36"x36"x14" American, 2 heads.  
48"x48"x10" Cincinnati h. d., 4 hds.  
24"x24"x8" Woodward & P., 1 hd.

## MILLING MACHINES

No. 4 B. & S. Univ., c. p., comp.  
No. 15 Garvin Vert. Spindle.  
No. 4 Cinti. Hi-Pwr. Vert., s. p., p. r. t.  
No. 3 B. & S. Vertical, sgl. pulley.  
No. 3 Cinti. Hi-Pwr. Vert. s. p.  
Becker Model "B" Vert. Continuous.  
Becker Model "C" Vert. Continuous.  
No. 1A Owens Univ., cone pul. compl.  
No. 1 Hendey Univ., cone pul. compl.  
No. 4 Cinti. Hi-Power Pl., s. p., p. r. t.  
No. 3 Cincinnati Hi-Power Plain, s. p.  
No. 3 Hvy. Ohio Plain, c. p., p. r. t.  
No. 3 Brown & Sharpe Plain, c. pulley.  
No. 3 Kempsmith Plain, cone pulley.  
No. 3 Hendey Plain, cone pulley.  
Nos. 2½ & 2 LeBlond Pl., cone pulley.

No. 2 Cincinnati Plain, cone pulley.  
No. 2H Brown & Sharpe pl. cone pulley.  
No. 1½ B. & S. Plain, cone pulley.  
No. 0½ Cincinnati Plain, cone pulley.  
28" Cincinnati Semi-Automatic.  
28" Cincinnati Semi-Auto. Face.  
24" Cincinnati Automatic.  
18" Cincinnati Plain Mfg. Millers.  
Gooley & Edlund, Briggs type, Mfg.  
No. 1½ B. & S. Pl. Mfg., taper sp. nose.  
No. 7H Becker Lincoln type MFG.  
Hendey Duplex Milling Machine.  
No. 6 Whitney Hand Miller.  
No. 1 Bristol b. b. Hand Miller.  
No. 2 Knight Milling and Drilling Mche.  
No. 3½ Fox Hand & Power Millers.

(Continued on next Page)

61 Spring Grove Ave., **CINCINNATI, O.**  
What have you to Sell?

# Rebuilt and Guaranteed Machine Tools

(Continued from Preceding Pages)

## MISCELLANEOUS

Air Compressor, 18x12x12 Worthington, dbl. steam drive, cap. 700 cu. ft.  
Air Comp. 8½"x10" Worthington, b.d.  
Arbor Presses, No. 5 Greenerd, (3).  
Arbor Presses, Nos. 3 & 3½ Greenerd.  
Arbor Press, No. 55 Atlas Pwr., b. d.  
Automatics, Nos. 52, 53, 54, & 56, National Acme, 4-spindle.  
Automatic, No. 5A Potter & Johnston, late type, 21,000 serial, (3).  
Automatic, No. 6A Potter & Johnston, late type, 19,000 serial.  
Bolt Cutters, 1" Acme Class "A".  
Bolt Thread. Mche., 1" Landis.  
Bolt Thread. Mch., 2½" Landis, 1 s.  
Bolt Thread Mch., 1½" Landis 2-sp.  
Boring Mill, 51" Bullard vert., 2 hds.  
Boring Mill, 42" Bausch vert., 2 hds., power rapid traverse.  
Boring mill, 37" Niles Vertical, 2 hds.  
Boring Mill, 42" Bullard NEW ERA vert., thread att., t. a. lub. sys.  
Boring Mill, 3" Barrett Hor., 3" dia. bar.  
Boring mill, 3" Lambert Hor. s. p.  
Boring Mill, No. 3-A Univ. Hor. 3" bar.  
Broach. Mch., Nos. 2 & 3B LaPointe.  
Broaching Machines, Nos. 2 & 3 J. N. LaPointe Double.  
Broaching Machine, No. 3A LaPointe  
Chuck Mch., No. 23 New Britain Auto.  
Chuck Mch., No. 22 New Britain auto.  
Chuck Mch., No. 24 New Britain auto.  
Chuck Mch., No. 33 New Britain auto.  
Chuck Mch., No. 53 N. B. Auto., d.e.  
Forcing Press, 15 ton Lucas Pwr., b. d.  
Grinder, Detroit centerless, sgl. wheel.  
Hack Saw, 13"x16" Peerless H.S. Pwr.  
Hack Saw, 12"x12" Racine H.S. Pwr.  
Hack Saw, 6"x6" Peerless H.S. Pwr.  
Hammer, 25 lb. Little Giant Trip, b. d.  
Hammers, 40 & 60 lb. Bradley halve.  
Hammer, 50 lb. Bradley Up., b. d.  
Hammer, No. 5-A High Speed Rivet.  
Hammer, ¼" Schuster Riveting.  
Hammer, No. 4A High Spd. Riveting.

Hammer, No. 3A Hi-Spd. Riveting.  
Hammers, No. 1-AA High Spd. Riv.  
Hammer, No. 2-A H. S. Riv., h. d.  
Hammer, No. 1½B High Spd. Rivet.  
Keyseater, No. 0 M. & M., cap. ¾".  
Keyseater, No. 1 Baker Bros., cap. 1¼".  
Press, No. 14 Peck-Stow & Wilcox  
O. B. I. Power, D. A.  
Press, No. 5 L. & J. O. B. I., Pwr.  
Press, No. 3 L. & J. O. B. I., Pwr., New.  
Presses, Nos. 3 & 4 L. & J. O. B. I. Pwr.  
Press, No. 4 Robinson o. b. i. Pwr. grd.  
Press, No. 65-B Niagara double crank Power, flywheel.  
Press, No. 74 Consolidated Pwr. grd.  
Press, DNo. 2 Ferracute O. B. I. cam, double action.  
Press, D. D. No. 2 Ferracute O. B. I. cam, double action.  
Press, No. 73½ Bliss Trim., side shear.  
No. 63 Consol. sgl. crank, s. s. Pwr.  
Polishing Mche., Blevney, type "A".  
Profilers, No. 12 P. & W. 2-spindle.  
Profiler, No. 1 Garvin, 2-spindle.  
Punch & Shear, No. 2 L. & A., dbl. end.  
Punch & S., No. 3 Hilles & J., dbl. end.  
Rivet Spinner, No. 80A Grant.  
Shaper, 10" Pratt & Whitney Vertical.  
Shear, No. 662 Niagara 62" Power Gap, Square, 10 gauge capacity.  
Shear, 72" Kutachied Power Sq. 12 ga.  
Straightening Presses, No. 1 Springfield, bench type.  
Tapping Mchs., Nos. 1 and 2 Garvin Automatic, back geared.  
Threaders, 4½"x12" & 6"x14" P. & W.  
Threader, No. 3 Lees-Bradner Internal.  
Welder, Winfield Automatic Electric Spot, cap. 2 pieces of ¼".  
Welder, No. 3 Thomson Elect. Butt, ¾" round.  
Welder, Winfield Electric Butt, cap. ½" rounds.  
Welder, Federal Jr. Auto. Electric Spot, cap. 2 pieces of ½".

*Many Others. Send Us Your Inquiries.*

**We also buy machinery—what have you to sell?**

**EASTERN MACHINERY CO.**  
3261 Spring Grove Ave., Cincinnati, Ohio

# Midland Tools are Rebuilt and Guaranteed!

## LATHES

- 20"x10' Cincinnati.
- 20"x8' Walcott, q. c. g.
- 20"x8' Monarch, q. c. g.
- 20"x8' Cisco, q. c. g.
- 18"x8' American, q. c. g.
- 18"x8' Lodge & Shipley, grd. hd.
- 18"x8' Bradford, q. c. g.
- 18"x8' Prentiss, q. c. g.
- 16"x8' Hendey, q. c. g. pan bed.
- 16"x8' Monarch, q. c. g.
- 16"x8' Canedy-Otto, a. q. c. g.
- 14"x6' Goddard.
- 14"x6' Lodge & Shipley, grd. hd.
- 11"x5' South Bend.
- No. 3 Foster Turret Lathe.

## SHAPERS

- 30" Cincinnati triple geared.
- 21" American, b. g.
- 20" Kelley.
- 16" American, b. g.
- 15" Potter & Johnston, Univ.
- 14" Smith & Mills.
- 12" Smith & Mills.
- 24"x24"x5' Gray Planer.

## PUNCH PRESSES

- No. 4 American Can, o. b. i.
- No. 3C Consolidated, o. b. i.
- No. 1 Consolidated, o. b. i.
- No. 3 R. & K. s. a. double Crank.
- No. 0 V. & O. Punch Press.
- No. 3 Stiles, o. b. i.
- No. 1 American Can Kick Press.

## MILLERS

- No. 3 Brown & Sharpe, Univ.
- No. 3 Kempamith, Plain.
- No. 2 1/2 Kearney & Trecker Vert.
- No. 2 Brown & Sharpe, Plain.
- No. 2 American Plain.
- No. 2 Owen Universal.
- No. 1 1/2 American Plain.
- No. 10 Kempamith Hand Miller.
- No. 1 U. S. Hand Miller.

## GRINDERS

- No. 44 Bealy Disc Grinder.
- No. 11 Brown & Sharpe Plain.
- No. 12 Modern Tool Grinder.
- No. 1 Gallmeyer-Livingston Tool & Cutter Grinder, motor driven.
- No. 1 LeBlond Tool & Cutter.
- 18" Valley City Disc.
- No. 60 Heald Cylinder.
- No. 1 Gardner Disc & Surface.
- No. 1 LaSalle Surface Grinder.

## DRILL PRESSES

- 6' American Radial gear box dr.
- 3' Mueller Radial motor driven.
- 26" Superior geared, sliding head.
- 24" Barnes.
- 20" Hoeffler, 2-spindle.
- 20" Buffalo, b. g.
- 16" Henry & Wright h. a. b. b.
- 14" Henry & Wright h. a. b. b.
- 14" U. S. Drills.
- No. 2 Baush, 16-sp. Multiple Drill.

**9"x8" Ingersoll-Rand Air Compressor,  
Type ER1, with Tank, Complete.**

**We Specialize In Leather Belting, Ball  
and Roller Bearing Transmission**

**Midland Equipment Co., Inc.**  
**400 South Clinton St., Chicago**

# ReMANUFACTURED SAVE MONEY

—(ORIGINATED BY US)—

## MACHINE TOOLS

REG. U. S. PAT. OFF.

OUR GUARANT



This is only a partial list. Write for price on any tool you need, whether listed below or not.

### Lathes

- 1-66"x21' Putnam.
- 1-66"x16' Lodge & Shipley.
- 1-48"x50' Pond.
- 1-48"x24' Pond.
- 1-42"x50' Putnam Grd. Hd.
- 1-42"x50' American Grd. Hd.
- 1-36"x71' American Grd. Hd.
- 1-27"x14' Reed-Prentice Grd. Hd.
- 5-28"x16' Niles-Bement-Pond.
- 10-26"x16' Bridgeford.
- 5-26"x14' Niles-Bement-Pond.
- 5-26"x12' Bridgeford.
- 13-26"x11' Wickes.
- 40-26"x10' Niles-Bement-Pond.
- 21-26"x10' Canada.
- 15-26"x10' Whitcomb-Blaisdell.
- 44-26"x10' Bridgeford.
- 9-25"x12' LeBlond.
- 1-24"x10' Cisco.
- 5-20"x22"x16' American.
- 1-20"x12' L. & S. Sel. Grd. Hd.
- 30-20-22"x8' American.
- 4-18"x8' L. & S. Sel. Grd. Hd.
- 1-18"x8' Lodge & Shipley.
- 1-14"x8' Platt & Whitney.
- 1-16"x10' Sundstrand Mfg.
- 3-16"x8' Sundstrand Mfg.
- 5-14"x8' American Gd. Hd.
- 2-4"x60" Loswing.
- 5-34" Fitchburg Loswing.

### Radial Drills

- 1-5' Western Heavy.
- 1-4' Reed-Prentice.
- 1-4' Fostick.

### Auto. Screw Machines

- 7-No. 6-A Potter & Johnston.
- 2-No. 5-A Potter & Johnston.
- 1-No. 56 National Acme.
- 1-1"x5" New Britain.

### Turret Lathes

- 10-24" Steinfle; 1-24" Gisholt M. J.
- 3-21" Gisholt.
- 3-20"x8' American.
- 1-No. 7 Foster, Geared Head.
- 1-No. 3-A Warner & Swasey.
- 2-No. 3 Cincinnati-Acme Univ.
- 7-2-spindle Jones & Lamson.
- 1-18" Acme.
- 3-16" Cincinnati-Acme-Fox.

### Vertical Boring Mills

- 1-10' Niles; 1-72" Niles.
- 2-42" Gisholt.
- 1-60" Pittsburg.
- 2-48" Colburn; 1-42" Colburn.
- 1-42" Bullard, New Era.
- 1-36" Bullard, New Era.
- 1-36" Bullard, Rapid Production.
- 2-36" Gisholt.
- 2-32" King.
- 1-30" Flatner.
- 1-30" Gisholt.

### Horizontal Boring Machine

- 1-No. 12 P. & H.
- 1-44" Bar Niles-Bement-Pond.
- 1-4" Bar Gisholt.
- 3-No. 1 Barrett.
- 5-Rockford.

Phone  
HAYmarket  
7660

HILL, CLARKE & CO. OR



# ON THESE FINE MACHINES

**Your money back if you return a machine within thirty days. No excuses necessary.**

*Below, a small section of our stock*



## Drill Presses

- No. D-31 Fox.
- No. 4 4-spindle Foote-Burt.
- No. 3 6-spindle Foote-Burt.
- 6-spindle Allen.
- 4-spindle Allen.
- 2-spindle Sipp.
- 22" Barnes, Self Oiling.
- 28" Superior.

## Gear Cutters and Hobbers

- No. 5 60" Brown & Sharpe.
- No. 4 48" Brown & Sharpe.
- No. 36-H G. & E.
- No. 3-28" Brown & Sharpe.
- No. 36BM G. & E.
- No. 6 Fellows.
- 18" Gleason.

## Milling Machines

- No. 4 Cincinnati; 1-No. 4 Becker.
- No. 3 Brown & Sharpe.
- No. 2 Brown & Sharpe.
- No. 0 Brown & Sharpe.
- No. 25 Becker.
- No. 2-Y Brown & Sharpe.
- No. 2 Kempsmith Univ.
- No. 1 1/2 Garvin Duplex.
- Type B Briggs.

## Vertical Millers

- Model ACS 2-spindle Becker.
- Model SD Becker.
- No. 6 Becker.
- No. 4 Cincinnati.
- No. 3-B Milwaukee.
- No. 3 Cincinnati.
- No. 2 Brown & Sharpe.
- Model CS Becker.

## Shapers.

- 1-24" Potter & Johnston, M. D.
- 1-20" Columbia, M. D.
- 1-20" Davis, M. D. 1-16" Columbia.
- 1-16" Gould & Eberhardt, M. D.

## Planers

- 1-72"x84"x12' Gray.
- 1-60"x48"x12' N.-B.-P.
- 1-48"x48"x10' Gray.
- 1-48"x48"x16' Niles - Bement - Pond.
- 3-36"x36"x18' Cincinnati.
- 1-36"x36"x16' Rockford.
- 2-36"x36"x8' Ohio.
- 1-36"x30"x20' Whitcomb-Blaisdell.
- 1-30"x30"x8' Niles - Bement - Pond.
- 1-30"x30"x8' Gray.
- 1-30"x30"x8' Liberty.
- 2-24"x24"x6' Gray.

## Grinders

- 1-26"-37 1/2"x96" Norton Gap.
- 1-24"x96" Norton.
- 1-18"x96" Norton.
- 2-16"x50" Norton.
- 1-14"x72" Norton.
- 4-14"x50" Norton.
- 1-12"x120" Landis.
- 1-10"x120" Norton.
- 1-10"x72" Norton.
- 1-10"x52" Landis.
- 6-10"x50" Norton.
- 1-No. 14. 10"x48" B. & S.
- 4-10"x24" Norton.
- 2-10"x36" Norton.
- 3-No. 12 8x36" B. & S.
- 7-6"x32" Norton.
- 1-12"x36" Cincinnati Universal.
- 1-No. 60 Heald.
- 1-No. 12 Persons & Arter Surface.

**CHICAGO**

645 W. Washington  
Boulevard.

**CHICAGO, ILL.**

Cable Address  
Remand

# The Strong, Carlisle & Reputation and Guar Used and Rebuilt Ma

*Partial list herewith-*

## ENGINE LATHES

- |                                          |                                          |
|------------------------------------------|------------------------------------------|
| 14"x 6' LeBlond, l. c. g. and chuck.     | 18"x 8' Boye & Emmes, c. r., q. c. g.    |
| 14"x 6' Hamilton.                        | 18"x 8' Prentice, compound rest,         |
| 14"x 6' Porter, compound rest and        | l. c. g., chuck.                         |
| taper attachment, l. c. g.               | 18"x 10' Star, 4-s. c., s. g., with 16"  |
| 14"x 8' Walcott, c. r., q. c. g.         | 4-jaw ind. chuck.                        |
| 15"x 8' Hamilton, c. r., q. c. g.        | 18"x 10' Walcott, 3 step cone, d. b. g., |
| 16"x 8' Bradford, c. r., loose change    | semi quick change.                       |
| rest.                                    | 24"x 12' Schumacher & Boye, c. r.,       |
| 16"x 8' Monarch, compound rest,          | q. c. g., 3-step cone, d. b. g.          |
| standard pattern.                        | 7"x 3" Cataract Precision bench lathe    |
| 16"x 8' Rockford, 3 step cone, d. b. g., | and countershaft.                        |
| c. r. and t. a., semi quick change.      |                                          |

## TURRET LATHES AND SCREW MACHINES

- |                                        |                                          |
|----------------------------------------|------------------------------------------|
| No. 00 Brown & Sharpe auto.            | 1"x 7" Millholland, p. h., a. c. & b. f. |
| No. 0 Brown & Sharpe auto.             | No. 2 Warner & Swasey, p. h., a. c.      |
| 12" W. & S., friction head.            | and b. f.                                |
| 14" W. & S., friction head, (2).       | No. 4 Warner & S., g. f. h., a. c. and   |
| 16" W. & S., friction head.            | b. f.                                    |
| 1" Foster, plain head, a. c. and b. f. | No. 55 Nat'l Acme 4-spd. auto.           |
| No. 3, 1 1/2" Woods tilted turret.     | No. 3 Foster g. f. h. turret screw mch., |
| 1" Briggs, p. h. with a. c. and b. f.  | with p. f. carriage and turret.          |

## DRILLING MACHINES

- |                                       |                                        |
|---------------------------------------|----------------------------------------|
| 20" Barnes Plain Lever Feed.          | No. 40 Natco Straight Line Multiple    |
| 3' Western Gear Box, single pulley    | Spindle Drill, 8-spindle head with     |
| drive with t. a.                      | two speeds in head.                    |
| 4' Mueller, gear box, sgl. pulley dr. | Fox multiple spindle, sliding head,    |
| 8' Americana, triple grd., 8-speed    | arranged for 12 spindles (2).          |
| change, gr. box, sgl. pulley drive.   | No. 44 Colburn, sgl. sp. heavy duty,   |
| 12-spindle Moline, cam fd., two tbl.  | 2 1/2" cap., with solid sp. and flange |
| No. 22 Colburn, sgl. sp., hvy. duty,  | for receiving multiple drill heads,    |
| 1 1/2" cap., with solid spindle and   | new, (2).                              |
| flange for receiving multiple drill   | No. 34 Demco high speed bench          |
| heads, new, (2).                      | drill with C spindle, new.             |
| No. 30 Natco, belt driven.            | Four-spindle Allen, h. s., b. b., hand |
| Gordon single spindle, h. s., b. b.   | feed.                                  |

# The Strong, Carlisle & Hammond Co.

# Hammond Company Warrantee Back of Every Machine Tool

*Let us have your inquiries.*

## MILLING MACHINES

No. 6 Whitney hand, (3).  
No. 3 Pratt & Whitney hand miller.  
No. 1 Toledo hand millers, (2).  
No. 0 Bickett, hand, bench type, (2).  
No. 2 Cincinnati vertical, s. p. d.  
Briggs Type "A" motor driven with motor.

2-A Brown & Sharpe universal constant speed drive.  
Becker 2-spindle, with rotary table.  
24"x18"x60" Ingersoll, Farwell vertical milling head.  
No. 3 Brown & Sharpe Plain, cone drive, with taper nose spindle.

## SHAPERS AND PLANERS

25" Smith & Mills Back Geared Crank.  
25" Smith & Mills Back Geared Crank.  
20" Hendey friction, (2).  
22"x22" x 5' Putnam planers, (2).  
36" Whipp Open Side.

26"x30"x6' Cleveland open side one rail head, one side head.  
72"x72"x26' Fitchburg, four heads.  
38"x38"x10' Pond, 2 heads on rail.  
28"x28"x8' Gray Planer, one head on rail.

## CENTERING MACHINES

Centering machines, single spindle Cadillac.

## GRINDERS

30"x84" Diamond Face Grinder, belt driven.  
No. 3 Diamond wet tool grinder with drop apron, new.  
No. 4 Diamond wet tool grinders with drop apron, new.  
No. 14—48" B. & S. plain, (3).  
No. 6-A Bryant internal.  
Webster & Perks, h. s., b. b., double spindle polishing lathes, cabinet base (6).

No. 10—18" Besly disc grinder.  
No. 3 Brown & Sharpe planer type surface grinder.  
Gisholt universal form tool grinder.  
Type "DE" Hisey-Wolf internal.  
No. 11 Brown & Sharpe pl. grinders.  
Plain emery wh'l stand with column.  
C3A Grand Rapids duplex drill grinders with wet att., new.  
Landis Internal, with countershaft.

## MISCELLANEOUS

Arbor press, No. 28 Atlas.  
Boring and Turning Mill, 52" Bullard  
Vertical 2 swivel heads, motor dr.  
Boring Mill, 34" Bullard Rapid Production with side head, belt driven.  
Drill, No. 1-S Garvin Duplex.  
Filing Machine, No. 2 Cochrane-Bly.  
Gear Cutter, No. 4—48" B. & S.  
Hand brake, 5' Dreis & Krump.

Keyseater, No. 0 Baker, practically new.  
Pipe machine, No. 300 Oster, 1/8" to 2".  
Pipe machine, 8" Jarecki, No. 88.  
Power Press, Max Arms S. S. Plain, 8" stroke, on inclined legs.  
Power press, P-4 Ferracute Plain.  
Tappers, Garvin No. 2-BG (2).

**Cleveland, Ohio; Detroit, Michigan**

# Good Machines at

2—(USED) No. 4 Hurlburt-Rogers Cone Type Cutting-Off Machines, capacity $\frac{1}{2}$ " to 4", automatic feed and stop, with pump, pan bed and countershaft, each	\$ 200.
1—(USED) Ingersoll-Rand Pneumatic Drill, serial CC-SB-A971	20.
10—(NEW) 16" Gordon Bench Sensitive Drills, friction drive, No. 2 Morse taper hole in spdl., drilling cap. $\frac{5}{8}$ ", ea.	80.
1—(USED) American Blower Exhaust Fan, type H. 45"; outlet, 16"x16"; inlet 19" round	10.
1—(USED) 6"x32" Norton Plain Cylindrical Grinder with automatic feed, water attachment, capacity for wheel 14" diameter, with countershaft	260.
1—(USED) Wilmarth and Morman (New Yankee) Twist Drill Grinder, motor drive, direct current, 230 volt, speed 1150 and 1200 r.p.m. Largest holder $\frac{1}{2}$ " to $3\frac{1}{2}$ " cap., small holder No. 52 to $\frac{5}{8}$ " drills; with water attach.	175.
1—(USED) No. 26 Bealy Dbl. Disc Grinder with two disc and c. s.	200.
1—(USED) No. 5 Oliver Motor Driven Twist Drill Grinder, capacity $\frac{1}{4}$ " to $2\frac{1}{4}$ ", 1 h. p. motor, 220 volt, 60 cycle, single phase, 1750 r. p. m.	175.
1—(USED) No. 210 Heald Ring Surface Grinder	100.
1—(USED) No. 210 Heald Ring Surface Grinder	50.
1—(NEW) No. 23-B Valley City Double End Disc Grinder with right hand lever feed to table, left hand plain table, two 24" steel discs, hand press and countershaft	375.
1—(USED) No. 5 Williams-White Drop Hammer; weight of ram 600 lb.; distance between guides $16\frac{1}{4}$ "; length of guides 4' 2". With sandage lifter, single pulley dr. 24"x6 $\frac{1}{2}$ "	200.
1—(NEW) No. 1 Davis Keyseater arranged for motor drive	455.
1—(USED) 21"x12" LeBlond Heavy Duty Automobile Lathe with 3-step cone double friction back gear, plain rest, pan bed and pump, dbl. friction countershaft. Machine will swing over shears 22 $\frac{1}{2}$ " and takes between centers 7'. Serial NF-3498	1200.
1—(USED) 19"x8" LeBlond Heavy Duty Automobile Lathe with 3-step cone double friction back gear, double friction countershaft. Serial NE-1922	800.
3—(USED) 13"x6" Sebastian Standard Loose Change Gear Engine Lathes, 4-step cone, single back gear compound rest and countershaft, each	150.
1—(USED) 13"x6" Willard Standard Loose Change Gear Engine Lathe, 3-step cone double friction back gear, compound rest, single friction countershaft	150.
1—(USED) 14"x6" Flather Standard Loose Change Gear Engine Lathe, 4-step cone single back gear, dbl. friction c. s.	150.
1—(USED) 14"x6" Carroll-Jamieson Engine Lathe, 4-step cone single back gear, has four change box for geared feed, compound rest, double friction countershaft	150.
1—(NEW) No. 1 $\frac{1}{2}$ Knight Vertical Milling Machine with power feed to table, vise and countershaft	900.

## PENINSULAR MAC

2921-2925 East Grand Blvd.

# Reasonable Prices

1—(USED)	Bethel-Player (Fraser) Lapping Machine with 26" lapping plates for lapping piston rings, tight and loose pulley on machine for belt drive 12"x2½"	700.
1—(USED)	No. 10 Pratt & Whitney Hand Milling Mche. with c. s.	150.
1—(USED)	No. 0 Brown and Sharpe Plain Miller, belt feed, oil pot and double friction c. s., without back gears.....	275.
1—(USED)	No. 32 Kemp Smith (Lincoln Type) Milling Machine. Table range 36"x5½"x8½", No. 10 Brown and Sharpe taper hole in spindle; center of spindle to under side of overarm 4½", with arbor and countershaft.....	300.
1—(NEW)	No. 9 Blackmer Hand Rotary Pump, capacity 12 gallons per minute.....	15.
2—(NEW)	No. 30 Long and Alletatter Open Back Inclinable Power Presses, belt drive, weight of flywheel 350 lbs.; total weight of machine 2200 lbs.; stroke 2½", each...	400.
1—(NEW)	No. 22 Rockford Flywheel Horning Press with adjustable table, stroke 1½"; weight of machine 2670 lbs....	423.
1—(NEW)	No. 2 Rockford Open Back Inclinable Flywheel Press, stroke 2".....	325.
1—(NEW)	No. 4 Rockford Open Back Inclinable Flywheel Press, stroke 2½"; weight 4000 lbs. ....	750.
1—(USED)	Brown Electric High Pressure Indicating Pyrometer with switchboard for six points, type H, with thermo couples and registers 300 to 3000.....	25.
2—(USED)	12" Rochester Gear Tooth Rounding Machines, capacity largest gear 12", smallest gear 1½"; complete with oil pump, arbor and countershaft, each.....	250.
1—(USED)	32" Band Saw (Wood).....	100.
1—(USED)	Napier Metal Band Saw, vise opens 6"; complete with tight and loose pulleys for belt drive.....	100.
1—(USED)	No. 15 Lea-Simplex Type BD, Cold Metal Saw for belt dr., capacity round stock 5"; square stock 4½"; I-beams 9"; tight and loose pulley. Mche. like new...	500.
1—(USED)	No. 1 National Acme Screw Slotter.....	125.
1—(NEW)	No. 1 Frew Automatic Tapping Machine, belt drive with countershaft; takes ½" U. S. tap, .....	345.
1—(USED)	1"x15" Pratt and Whitney Turret Lathe with power feed to turret slide, 3-step cone, without back gears, independent stop to each face of turret, chuck capacity 1", has wire feed att., pan bed, triple countershaft ...	500.
1—(USED)	2½"x26" Pratt and Whitney All Geared Turret Lathe with cross feeding turn table. Machine will swing 20", takes 2½" in spindle.....	300.
1—(USED)	No. 2 Warner and Swasey Hollow Hex. Turret Lathe with automatic chuck, roller wire feed, power feed to turret slide, friction head, 3-step cone, pan bed, and pump, triple friction countershaft. Spindle cap. 2"...	400.
1—(USED)	No. 100 Agnew Electric Butt Welder, capacity ½" round, transformer wound for 220 v., 60 cy. current.....	100.

## CHINERY COMPANY

Detroit, Michigan

# Machines of Quality

## MACHINES OF THIS TYPE ARE HARD TO FIND

- 24" Bullard Vertical Turret Lathe, New Era Type.
- 3A Warner & Swasey Turret Lathe.
- 60" Brown & Sharpe Spur Gear Cutter.
- 12"x6' Hendey Geared Head Lathe, arr. mtr. dr., including 220 v., 3 ph., 60 cy. a. c. motor.
- 24"x18' American Geared Head Lathe, a. c. motor drive, motor included.
- 12" Persons & Arter Rotary Surface Grinder, with 220 v., 3 ph., 60 cy. a. c. motor drive.
- 22" Pratt & Whitney Vertical Surface Grinder, 72" table, large mag. ch. and 3 new wheels.
- 6"x32" Norton Plain Grinder.
- 10"x50" Norton Plain Grinder.
- 14" Pratt & Whitney Vertical Surface Grinder.
- No 4, 16"x72" Cincinnati Universal Grinder.
- 24" Cincinnati Bickford Upright Drill, friction back geared, sliding head.
- 3' Morris Plain Radial, sgl. pul. dr. thru gear box.
- 3' American Plain Radial Drill, gear box drive.
- 4' Hammond Sensitive Radial Drill.
- No. 2 Baker Keyseater.
- No. 3-B B. & S. Heavy Plain Miller, s. p. d.
- 2¼" Acme Bolt Cutter.

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## LATHES

- 3-12"x5' Henney yoke head, with taper attachments.
- 2-12"x5' Henney yoke head, standard equipment
- 1-14"x6' Henney yoke head, standard equipment.
- 1-14"x6' Monarch, standard equip.
- 1-14"x6' LeBlond q. c.
- 1-16"x6' Flather q. c.
- 1-16"x6' Monarch q. c.
- 1-16"x6' Reed s. c.
- 1-17"x8' LeBlond production.
- 1-18"x8' American q. c.
- 1-18"x6' Kahn Mayer s. c.
- 1-18"x8' Reed s. c.
- 1-18"x8' Shumacher Boye q. c.
- 3-20"x9' Wicks production.
- 1-20"x8' Monarch q. c.
- 2-24"x9' American manufacturing.

## DRILLS

- 1-No. 314 Baker heavy duty.
- 1-No. 216 Baker heavy duty.
- 1-Rockford H. D. all geared.
- 1-No. 25 Foote Burt s. p.
- 1-No. 24 Foote Burt s. p.
- 1-No. 65-D-5 Moline holehog 9-sp.
- 1-No. 17 Foote Burt 4-spindle.
- 1-No. 2 Foote Burt 5-spindle rail.
- 1-No. 1 Baush 16-spd. multiple.
- 1-Fox 8-spindle multiple.
- 2-Barnes horiz. radials.
- 3-4 spindle Allen high speed.
- 2-4 spindle Avey high speed.
- 1-3 spindle Allen high speed.
- 1-3-spd. Leland & Gifford hi spd.
- 1-New 20" Barnes camel back.
- 1-26" Aurora sliding head.
- 1-32" Cincinnati sliding head.
- 1-36" Aurora sliding head, mtr. dr.

## MILLS

- 1-No. 4 LeBlond plain, cone drive.
- 3-No. 3 Cincinnati pl., cone drive.
- 1-No. 2 Cincinnati all geared, high power, plain, s. p. d.
- 1-No. 2 Cincinnati plain, cone dr.
- 1-No. 2-B Rockford universal, cone drive, vertical head.
- 1-No. 1 1/2 Valley City universal.
- 1-No. 3 Brown & Sharpe vertical, all geared, s. p. d.

- 5-Gooley & Edlund mfg. all sizes.
- 3-12" Cincinnati manufacturing.
- 1-28" Bullard vertical boring.
- 1-4" Bar Niles boring and milling.

## SHAPERS AND PLANERS

- 1-15" Potter & J. b. d. shaper.
- 4-16" Gould & E. b. d. b. g. shaper
- 1-16" Ohio b. g. shaper.
- 1-20" Kelly b. g. shaper, b. d.
- 3-20" G. & E. b. g., b. d. shaper.
- 2-24" G. & E. b. g., b. d. shaper.
- 1-26" S. & M. b. g., belt dr. shaper
- 1-30"x10"x8' Gray planer, 2 heads on cross rail.
- 1-36"x36"x8' Cincinnati, planer, two heads on cross rail.
- 1-30"x36"x10' Bickett iron planer, two heads on cross rail.

## GRINDERS

- 1-No. 3 Brown & Sharpe univ.
- 2-No. 2 Brown & Sharpe univ.
- 1-No. 2 Bath universal.
- 2-No. 10 Brown & Sharpe plain.
- 1-14x36 Queen City plain, self-contained.
- 2-6x32 Norton plain.
- 2-6x15 Fitzburg plain.
- 4-No. 65 Heald cylinder.
- 1-Madison cylinder.
- 3-No. 2 H. & S. vertical surfacer.
- 1-14" Pratt & Whitney vert. tur.
- 1-Reed Prentice vertical surface.
- 1-No. 3 Wilmarth & Morman sur.
- 4-7 1/2 H. P. U. S. heavy duty, motor drive, snagging.
- 1-No. 15 Bryant internal.
- 1-No. 10 Bryant internal.

## TURRET LATHES AND SCREW MACHINES

- 1-20" Gisholt, 3 1/2" spindle.
- 2-Jones & Lamson dbl. spd. flat.
- 2-No. 2 Warner & Swasey hand screw machines.
- 3-No. 4 Warner & S. hand screw machines, friction head.
- 2-No. 6 Warner & S. friction head, hand screw machines.
- 2-No. 4 Bardons & Oliver friction head turret lathes.
- 4-18" Springfield Fox Monitor.

*(Continued on Top Half of Next Page)*



(Continued from Preceding Page)

### PRESSES

- 4—No. 35 Niagara solid back, plain, flywheel.
- 1—No. 40 Bliss plain horning.
- 1—No. 54 Toledo s. s. plain.
- 1—No. 55 Toledo s. s. plain.
- 1—No. 63 Consolidated s. s. geared.
- 1—No. 8 Rockford s. s. plain.
- 1—No. 66 Bliss Consolidated s. s. double geared.
- 1—No. 4 Bliss solid back.
- 1—No. 857 Toledo rack and pinion.
- 1—No. 666 Toledo knuckle joint.

### MISCELLANEOUS

- 1—24x16 Bury b. dr. air compressor.
- 1—9 $\frac{1}{2}$ x4x8 Ingersoll-Rand h. p. air compressor.
- 1—24" Landis bolt cutter.

- 2—No. 3 double-spindle LaPointe broaching machines.
- 3—4 $\frac{1}{2}$ " Williams cutting off machines.
- 2—Pridemore combination electric rollover machines.
- 10—high speed riveting hammers all sizes.
- 2—10" Allis Chalmers high service Centrifugal pumps.
- 3—9 x 7 x 12 Worthington duplex steam pumps.
- 1—36" Berlin Royal Invincible three drum sander.
- 1—42" Berlin Royal Invincible three drum sander.
- 1—Rickert & Shafer  $\frac{1}{2}$ " vertical radial tapping machine.
- 6—No. 2 Garvin tapping machines.
- 1—McGee motor drive wiring and edging machine.

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### VERTICAL BORING AND TURNING MILLS

- 14' Niles-Bement-Pond, Power Rapid Traverse, Two swivel heads, Table 168" diameter x 12" thick, Motor Drive.
- 10' Betts, Two swivel heads, Table 120" dia. x 8" thick, Motor Drive.
- 96" Cincinnati, Rapid Production Massive Pattern Type, Power Rapid Traverse, Two swivel heads, Table 96" dia. 8" thick, Motor Drive.
- 96" Betts, Two swivel heads, Table 96" dia. x 7" thick, Motor Drive.
- 72" Betts, Two swivel heads, Motor Drive.
- 72" Cincinnati, Rapid Production Massive Pattern Type, Power Rapid Traverse, Two swivel heads, Motor Drive.
- 60" Bullard, Two swivel heads, Single Pulley Drive.
- 42" Bullard, Two swivel heads, Single Pulley Drive.

### RADIAL DRILLS

- 6' American Triple Purpose.
- 5' Bickford Universal.
- 5' Bickford Plain.
- 6' Drees, Semi-Universal.
- 5' Niles-B.-P., Semi-Universal.
- 4' Bickford Plain.

### ENGINE AND TURRET LATHES

- 38"x42' Johnson, triple geared.
- 18"x15' Reed.
- 18" Libby Turret Lathe.
- 24" Steidle Turret Lathe.

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# A Few Listings From a Stock of 2000 "Restored" Machines

Gridley 4-spd. 9/16", 3/4, 1 1/4", 1 3/4".  
B. & S. Auto. Nos. 00, 0, 1, 2.  
New Britain Automatic Nos. 22 & 23.  
P. & Johnston No. 5-A & No. 6-A.  
25' Sellers Vert. Boring Mill.  
12' Sellers Vert. Boring Mill.  
10-16' Niles Vertical Boring Mill.  
12' Betts Vertical Boring Mill.  
10' Niles Vertical Boring Mill.  
84' Bullard Vertical.  
60' Cincinnati Vert. Boring Mill.  
60' N.-B.-Pond Vert. Boring Mill.  
42' King Vertical Boring Mill.  
42' Bullard Vert. Boring Mill.  
10'x10'x20' Bement Planer, four hds.  
10'x6'x16' N.-B.-P. Planer 4 hds.  
84' Newton Rotary Planer.  
72'x72'x18' D. & H. Openside.  
48'x48'x14' D. & H. Openside.  
48'x48'x14' N.-B.-P. Planer 4 hds.  
48'x48'x12' N.-B.-P. Planer 3 hds.  
48'x48'x10' Cincinnati Planer 4 hds.  
36'x36'x12' D. & H. Openside 3 hds.  
24'x24'x10' W.-Blaisdell tow heads.  
32' G. & E. Shaper motor drive.  
32' Cincinnati Shaper belt drive.  
28' Queen City Shaper belt drive.  
24' Potter-Johnston Shaper, Universal.  
24' Stockbridge Shaper Single Pulley.  
20' Stockbridge Shaper Single Pulley.  
24' G. & E. Shaper m. d. gear box.  
16' Stockbridge Shaper, belt drive.  
90' Putnam Wheel Lathe.  
72'x58' N.-B.-P. Lathe motor drive.  
50'x30' New Haven, Lathe m. d.  
48'x22' N.-B.-P. Lathe motor drive.  
42'x39' Putnam Lathe, motor drive.  
42'x18' American Lathe motor drive.  
36'x14' Bridgeford Lathe motor drive.  
30'x12' American Lathe motor drive.  
26'x22' Boye & Emmes Lathe m. d.  
60'-72', B. & S. Gear Cutter.  
54' Gleason Gear Planer.  
90' Pratt-Whitney Gear Cutter.  
6", 11", 18" Gleason Gear Generators.  
96' Gould & E. Hobber No. 96-H.

No. 12 Barber-Colman Hobber.  
36-H C. & E. Hobber.  
120' W. & W. Gate Shear.  
120' Hilles-Jones Gate Shear.  
No. 8 Kling Double Angle Shear.  
No. 2 Hilles-Jones Dbl. Angle Shear.  
No. 6 H. & J. Coping Machine.  
No. 27 Williams-White Bulldozer.  
No. 4 Hilles-Jones Punch-Shear.  
2 1/2' Ajax Upsetter.  
1 1/4' & 1 1/2' Acme Upsetter.  
No. 8 Jackson Die Sinker.  
No. 2 Baker Keyseater.  
6' Bar Barrett Horizontal.  
4' Bar Barrett Horizontal.  
6' Cincinnati-Bickford Plain Radial.  
6' Mueller Plain Radial.  
6' American Plain Radial.  
6' American Universal Radial.  
5' American Universal Radial.  
5' C-Bickford Universal Radial.  
5' Western Plain Radial.  
7-spindle Henry-Wright B. B.  
6-spindle Henry-Wright B. B.  
6-spindle Allen B. B.  
4-spindle Allen B. B.  
3-spindle Allen B. B.  
4-spindle Rockford Gang.  
4-spindle Foot-Burt Rail.  
No. 3-D Colburn Heavy Duty.  
No. 3-A Warner & Swasey Bar.  
No. 3A Warner & Swasey Chucking.  
No. 6 Warner & Swasey Auto Chuck.  
No. 4 Warner-Swasey Auto Chuck.  
No. 2-A W. & S. Bar and Chucking.  
18" Libby Turret.  
1 1/2x18" Pratt-Whitney Turret.  
No. 2-A Brown-S. Universal Miller.  
No. 4 Cincinnati Universal Miller.  
No. 4 Cincinnati Vertical Miller.  
No. 3 Cincinnati Vertical Miller.  
No. 2 Knight Duplex Miller.  
No. 3 Cincinnati Plain Miller.  
No. 2 1/2 LeBlond Plain Miller.  
No. 14 and No. 30 Natco Multiple.  
No. 3 and No. 4 Bausch Multiple.

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## BOLT CUTTERS

- 1—Acme  $\frac{1}{2}$ ", 2-spindle.
- 1—Acme  $\frac{1}{2}$ ", 3-spdl., with lead screw.

## BROACHES

- 3—Hudson LaPointe No. 1.
- 1—J. N. LaPointe No. 2, double spindle, belt drive.
- 1—J. N. LaPointe No. 3, double spindle, motor drive.

## DRILLS

- 2—Kokomo 24", sliding head.
- 2—Snyder 24", sliding head.
- 1—Kokomo 28" sliding head.
- 1—L. & G. single spindle, h. s., b. b.
- 1—Allen 2-spindle, h. s., b. b.
- 1—Demco single spindle, h. s., b. b.
- 1—Allen 4-spindle, h. s., b. b.
- 1—Sipp 3 spindle, h. s., b. b.
- 1—Footo-Burt No. 4  $\frac{1}{2}$  6-spindle rail.
- 1—Natco Garvin 1SS, double end.
- 1—Footo-Burt 15 $\frac{1}{2}$ .
- 1—Footo-Burt 4-spindle.
- 1—Carlton 2 $\frac{1}{2}$ ' radial.
- 1—American 4' radial.
- 5—Fox multiple spindle.
- 2—Baush multiple spindle.
- 2—Natco multiple spindle.

## GRINDERS.

- 4—Brown & Sharpe universal No. 1, No. 2 and No. 3.
- 2—5x18 Ott plain cylindrical.
- 9—6x32 Norton plain cyl., motor drive and belt drive.
- 1—10x18 Norton plain cyl., motor dr.
- 1—10x36 Norton plain cyl., motor dr.
- 3—6x18 Landis plain cylindrical.
- 2—Gisholt cutter grinders, motor dr.
- 1—Bath universal.
- 1—Morse No. 1 Plain.
- 1—Wilmarth-Morman plain cyl.
- 3—Heald internal Nos. 70 and 75.
- 2—Oliver drill grinders, motor drive.

## GEAR CUTTING

- 1—5A Lees-Bradner Hobber.
- 2—No. 12 Barber-Colman Hobber.
- 1—16" Cincinnati Hobber.
- 6—Fellows No. 6 Gear Shapers.
- 6—Fellows No. 615 Gear Shapers.
- 6—Fellows No. 61 Gear Shapers.
- 1—Barnes 2-way Drill.
- 1—Rockford 2-way Drill.

## LATHES

- 2—16x6 Monarch screw cutting.

- 1—14x6 L. & S., grd. head, m. d.
- 3—20x8 Monarch, geared hd., m. d., taper attachment, draw-in att.
- 2—16x6 American, geared head, taper attachment, etc., motor drive.
- 2—16x6 L. & S., grd. hd., motor dr.

## MILLING MACHINES

- 3—Model C Becker, rotary table.
- 1—18" Cincinnati auto. knee type.
- 1—Kent-Owens semi-automatic.
- 1—24" Cincinnati semi-automatic.
- 1—14" Cincinnati semi-automatic.
- 1—18" Cincinnati semi-automatic.
- 5—Pratt & Whitney No. 10 auto.
- 2—Pratt & Whitney No. 2 plain.
- 2—Fox Hand Mills.
- 1—Becker semi-automatic.
- 1—Gooley & Edlund, Lincoln Type A
- 1—No. 6 Becker plain mill.
- 1—No. 2 Brown & Sharpe universal.
- 1—No. 2 LeBlond universal.
- 1—30" Newton C-65A rotary m. dr.

## SHAPERS

- 1—32" Cincinnati.
- 1—20" Kelly.
- 1—16" Ohio.

## TAPPING MACHINES

- 2—2X Garvin automatic.
- 2—No. 2 Garvin automatic.
- 2—Gateman automatics.
- 2—Rickert & Shafer automatic.

## AUTOMATIC THREADING MACHINES

- 2—Rickert & Shafer single spindle automatic, motor drive.

## SCREW MACHINES & CHUCKING MACHINES

- 3—No. 7 Hardons & Oliver.
- 2—No. 4 Warner & Swasey.
- 4—No. 6 Warner & Swasey.
- 2—No. 8 Warner & Swasey.
- 1—5A Potter & Johnston, 21000 serial.
- 1—2" Cleveland auto., motor drive.
- 1—53 New Britain automatic.

## MISCELLANEOUS

- 2—40 lb. Bradley Hammers.
- 1—Knowles Keyseater.
- 1—No. 6 Niagara Press.
- 1—Toledo Butt Welder.
- 1—Wire Straightener.
- 1—Pettingill Bumping Hammer
- Yoder Sheet Metal Machinery.
- 1—Sprue Cutter.
- 1—Cochrane & Bly Cold Saw.
- 1—Band Saw.

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- 1—36x16 Schumacher & Boye Lathe, quick change gears, triple geared, face plate,  $3\frac{1}{2}$ " hollow spindle, compound rest.
- 1—48x18 McCabe Double Spindle Lathe.
- 1—12x5 Hendey, pan bed, taper attachment, drawing-in collets.
- 1—16x6 Hendey Drawing-in collets with chuck, taper and relieving attachment, serial number over 22,000.
- 2—16x6 Hendey, Drawing-in attachment, serial numbers over 12,000.
- 1—16x6 Prentiss geared head, motor drive with A. C. Motor.
- 1—16x8 Prentiss geared head, motor drive with A. C. Motor.
- 1—16x8 Reed, motor drive with D.C. Variable Speed, quick chge. gears.
- 1—20x6 Reed Prentice, geared head, motor drive with A. C. Motor, heavy duty.
- 2—No. 2 Becker Vertical Millers.
- 1—No. 5 Becker Vertical Miller with rotary table.
- 1—No. 1½ Brown & Sharpe Universal Miller.
- 1—No. 2 Brown & Sharpe Universal, cone pulley drive with vert. attach.
- 2—No. 3 Cincinnati Plain Millers, cone pulley drive.
- 1—No. 1 Kempsmith Universal, slotted spindle.
- 1—No. 2½ LeBlond Plain Miller, cone pulley.
- 1—No. 2 Van Norman Duplex Miller.
- 1—4' Bickford Cincinnati Semi-Universal, Motor drive, thru gear box with A. C. Motor, Radial Drill.
- 1—36" Aurora Sliding Head Drill Press, motor drive with A. C. Motor.
- 3—24" Barnes Sliding Head Drill Presses, one single pulley drive, two cone pulley.
- 4—3 Spindle Henry & Wright Drill Presses.
- 1—No. 10 Brown & Sharpe Cylindrical Grinder.
- 1—No. 13 Brown & Sharpe Universal Grinder.
- 1—No. 70 Hald Grinder.
- 1—6x32 Norton Cylindrical Grinder.
- 1—60" Brown & Sharpe Spur Gear Cutter.
- 1—16" Cincinnati Gear Hobber.
- 1—No. 3 Bliss Stiles Flywheel Press.
- 1—No. 20 Bliss Inclined Press.
- 1—No. 30 Bliss Arch Press with roller feed.
- 1—No. 1 Cam Bliss Toggle Press.
- 1—No. 55 Swaine Press, plain flywheel.
- 1—No. 3 V. & O. Inclined Press.
- 1—24x24x6 Cincinnati Planer.
- 1—28x28x8 Cincinnati Planer.
- 1—No. 2 LaPointe double spindle Broaching machine.
- 1—2x24 Jones & Lamson bar and chucking equipment.

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Two spindle. 20" W. F. & J. Barnes Drill Press.  
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24"x42" Horizontal Tumbling Barrel.

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Barrel, with cabinet.

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- 3—LaPointe Nos. 1-2 and 3.

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- 2—American 22-26" S. S.  
7—Aurora 21-24" S. S.  
1—Barnes 25" S. S.  
2—Barnes Camel back.  
6—Cincinnati 21-36" S. S.  
5—Kern 20" S. S.  
1—Rockford 12" S. S.  
1—Superior 26" S. S.

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- 1—Barnes 4-spindle.  
Foot-Built No. 4, 6-spdl. special.  
2—Gardam 34-spindles.  
1—Rockford, 4-spindles.

## Drills—Radial

- 3—American 36" Sensitive.  
2—Carlton 36" Sensitive.

## Gear Shapers

- 10—Fellows No. 6 and 36".

## Grinding Machines

- 1—Cincinnati 12x36" Pl. External.  
13—Heald Int. Nos. 60-65-70-75.  
1—Brown & Sharpe No. 22 Int.  
Capitol No. 1 Internal.  
3—Bryant Chuck. Nos. 6 & 15A.  
19—Norton Pl. Ext. 6x32, 10x24,  
10x36, 10x50, 10x72, 14x72.  
1—B. & S. No. 11 Plain Ext.  
1—No. 3 Ohio Univ. Tool & Cut.  
2—No. 205 Rivett Radial.  
1—No. 2 LaSalle Surface.  
2—No. 3 Landis Universal.  
2—No. 6 Rivett Universal Inter.  
2—No. 14 Besley Disc.  
1—Gardner Disc.  
1—Norton Tool & Cutter.

## Hammers

- 1—No. 40 Beaudry.  
1—No. 55-H Williams & White.

## Lathes—Engine—Miscellaneous

- 2—14x6, 16x6 Amer. B.G., Q.C.  
2—14x6, Carroll & J. B.G., Q.C.  
2—16x6 Chard B.G., Q.C.  
2—24x11 Chard B.G., Q.C.  
4—Fitchburg Lo-Swing 3½x60".  
1—Fitchburg Lo-Swing 4".  
5—Greaves & Kluman 18x6,  
18x8, 30x8, B.G., Q.C.  
2—LeBlond 17x12, 21x12, B.G.,  
Q.C. Mfg.

- 1—Hamilton, 16x6, B. G., Q. C.  
6—Lodge & Shipley 18x8 16x6.  
20x12, 22x10, B. G., Q. C.  
1—L. & S. Duplex 24x12 Cr. Pin.  
5—Sidney 17x8, B. G., L. C. B.

## Lathes—Turret and Screw Mchs.

- 3—Acme 2¼x11—26".  
1—Bardons & Oliver No. 4.  
2—Dress 18 and 20".  
2—J. & L. 3¼ S. S.  
4—W & S. 18", No. 6.  
1—Millholland Screw 1½".  
3—Foster No. 2 Hand.

## Milling Machines—Vertical

- 1—Knight No. 2, 1—Becker No. 5.

## Milling Machines—Horizontal

- 3—B. & S. No. 1½B, 2B, 12.  
1—Cincinnati Plain.  
7—G. & E. (Briggs) A38" & B102.  
2—Milwaukee Nos. 2B and 3B.  
1—Pratt & W. No. 10 Hand.  
1—Stephoe Hand with Vert. Att.

## Planer

- 1—American 30x30x10.

## Presses

- 8—Toledo Indin. Nos. 1, 3½, 4.  
1—Max Ama No. 124.  
2—Hyman Straight Column.

## Saws

- 1—Peerless H. S. Cut Off 13x16.  
1—Atkins Power Nos. 7, 7-A.

## Screw Machines—Automatic

- 2—Brown & Sharpe, Automatic.  
2—Cleveland S. S. 2" and No. 3.  
2—Gridley 2¼" Single Spindle.  
4—Gridley ¾" 4-Spindle.  
3—Gridley, 1¼" 4-spindles.  
1—Gridley, 1¾, 4-spindles.

## Shapers—Crank

- 1—American 20".  
1—G. & E. 16" Hi-Duty.  
1—Gould & Eberhardt 20".  
1—Lodge & Davis 16".  
2—Stephoe 16".

## Miscellaneous

- 1—Davis Keyseater No. 1.  
1—Rockford Balancing Machine.  
1—Ingersoll Rand 5x5 Air Comp.  
1—Bullard Multi-Au-Matic 12".  
1—Lot motors AC & DC ranging  
¼ HP to 50 HP.

**The Indianapolis Machinery & Supply Co.**  
2141 Yandes Street, Indianapolis, Indiana

## NEW 3 PHASE MOTORS CHEAP—FROM ½ H. P. UP

### LATHES

Ames precision lathe.  
12"x 5' Cleveland, geared head.  
14"x 6' Carroll-Jamieson, new, q. c.  
14"x 6' Hamilton, grd. hd., motor dr.  
14"x 6' Monarch, quick change.  
14"x 6' Sebastian, grd. hd., m. d.  
14"x 8' Sidney, double back geared.  
16"x 8' Hamilton, quick change.

18"x10' American, quick change.  
20"x10' Hamilton, rapid production.  
20"x10' Prentice, taper attachment.  
20"x10' Boye & Emmes.  
24"x24' Prentice, with raising block.  
24"x10' American, quick change gear.  
8x60" & 3½x60" Fitchburg, Lo-Swing  
South Bend, new, all sizes.

### TURRET LATHES and SCREW MACHINES

Acme 1" cap., wire feed column.  
No. 4 Defiance, 1½" capacity.  
1½" capacity Smurr & Kamen.  
1½" Milholland.

2x24 and 3x36 J. & L.  
No. 1 Foster, 13/16" capacity, (2).  
Warner & Swasey No. 2.  
No. 52 National Acme automatic.

### SHAPERS

14" Niles, traveling head.  
14" Steptoe, crank.  
16" American, back geared.

16" Barker.  
16" O. & S., b. grd., new, low price.  
24" O. & S. back geared crank.

### PRESSES

No. 10 and No. 15 Excelsior, foot.  
Nos. 3-A & 5-A Willard inclinable.

Nos. 1, 1½, 2, 3 Robinson, new.  
No. 105 Baurath straight side.

### DRILLS and RADIALS

No. 1 Baush multiple.  
Baush 5' radial.  
Hilbert 3' radial.  
22", 24", 26", 28" and 32", sliding hd.  
32" Hoefer, sliding head.

6' Ceiling drill.  
35" Kokomo high speed.  
44" Stover.  
Sipp high speed, single-spindle.  
Hole Hog, No. 66-D, 7-spindle.

### MILLING MACHINES

No. 1½ American plain.  
One No. 1-Y Brown & Sharpe, plain.  
No. 2 Kempsmith plain.  
No. 3 Kempsmith plain, new.  
No. 25 Bilton.

No. 25 Becker plain, power feed.  
No. 2 H Brown & Sharpe plain.  
Oesterlein 24x7½x18 plain.  
Ingersoll 24" x 20" x 8" horizontal  
motor drive.

### GRINDERS

Nos. 1 & 78 W. & M. surface.  
6"x15" Fitchburg plain.  
12"x36" Cincinnati universal.  
16"x42" Landis universal.  
36" and 66" Yates plate.

No. 60 Heald cylinder.  
Schmitt cylinder grinder.  
J B X, W. & M. tool and cutter.  
No. 10 Besly 18" double disc.  
No. 20 Bryant, chucking.

### MISCELLANEOUS

Band saw, Clark, compound.  
Band saw, Napier 10"x10".  
Blower, No. 6 Piqua, pressure.  
Blower, positive pressure, Leiman  
Boring mill, Colburn No. 3, tur. hd.  
Brake 10', Keene, 18 ga.  
Brake, 12' Chicago Steel 18 gauge.  
Broaching mchs., 1 and 3 LaPointe.  
Compressors, 6x8, 8x8 and 9x8.  
Gear cutter, No. 3—26 B. & S.  
Gear cutter, No. 13 Brown & Sharpe.  
Gear miller, Bilton No. 1.  
Hammer, 150 lb. Standard drop.  
Pipe machines, 2", 4" & 6".  
Planer, 36"x36" Gray, heavy duty.

Planer, 24"x24"x8'.  
Planer, 36"x36"x14' Gray, 2 heads.  
Planer, 42"x42"x12' Gray, 2 heads.  
Planer, 48"x48"x16' Cincinnati, 4 hd.  
Punch & shear, ½x10" throat.  
Riveting hammers, Nos. 1, 2, 3, 4-A  
High Speed.  
Sand blast, Boland.  
Scale, 1500 lb. Toledo, dial type.  
Shear, 60" Peck, Stow & W., 18 ga.  
Shear, No. 362 Robinson.  
Shear, No. 20 Quickwork, 30" throat.  
Shear, circular, Pettingell, 60" thrt.  
Threading mche., W. & P. 2-spindle.  
Washing machine, Blakeslee.

THE  
**OSBORNE & SEXTON**  
MACHINERY Dept. H. COMPANY  
COLUMBUS OHIO

# We do not hesitate to advertise our prices— our Machine tools are guaranteed and rebuilt

## LATHES

52"x40' Pond Face plate drive, heavy duty.....	\$2000.
52"x24' Pond Face plate drive, heavy duty.....	1600.
25"x10' Lodge & Shipley Quick Change D. B. G. Hvy. duty	950.
24"x10' Schumaker Boye Q. C. D.B.G. heavy duty with t. a.	1100.
24"x8' Schumaker Boye Q. C. D.B.G. heavy duty with t. a.	950.
18"x8' Sidney, quick change, D. B. G. heavy duty, 90% new	850.
18"x8' Hendey tie bar, q. c. g., reg. equip. chuck	830.
16"x10' LeBlond q. c. g., 5 step cone	550.
16"x6' Bradford Quick Chge., with taper attach.	550.
14"x6' Mulliner q. c., tool room	450.
16"x6' Lodge & Shipley, q. c., tool room lathe	350.
2-11 1/2"x5' Sidney, q. c. lathes, brand new each	325.
2-11 1/2"x6' Sidney, quick chge. Lathes, brand new each.	350.

## SHAPERS

16" G. & E. crank Hi Duty....	\$ 675.
16" G. & E. crank Hi Duty....	650.
16" Cincinnati crank S. P. D..	550.
16" Hamilton crank Hi-D.....	475.
16" Smith & Mills Crank.....	350.

## DRILL PRESSES

4' Carlton heavy duty Radial motor driven, box table.....	\$ 875.
3' Bickford Radial, s. p. d. ....	600.
36" Cincinnati Bickford Drill Press, D.B.G., geared feeds	300.
26" Superior h. d., d. b. g.....	250.
25" Barnes Hvy. Duty, tap. att., slid. hd. dbl. bk. gear..	250.

26" Reed-Prentice Hvy. Duty, with tapping attachment, sl. head, single pulley dr.....	\$ 275.
24" Weigel sliding hd., dbl. bk. grd, all pwr. fds., hvy. d. (2)	250.
22" Silver sl. hd., d. b. g.....	150.
No. 20 Baker Auto., rotary tbl., multiple head, ball bearing...	450.

## GRINDERS

No. 3 Landis 12"x36" Full Uni- versal tool room complete...	625.
No. 1 Greenfield Plain Grinder, Hydraulic feed	275.
No. 2 Oesterlein Cutter Grinder	250.
No. 75 Heald Internal.....	250.

## MILLING MACHINES

No. 3 Brown & Sharpe Plain, Milling Machine.....	\$ 600.
No. 3 LeBlond Plain Milling Machine.....	550.
No. 1 LeBlond Plain Milling Machine.....	150.
Hand Millers—all sizes— ranging from \$50 to \$150.	
No. 3 Brown & Sharpe Univ. Milling Mch., with dividing head and vise	1200.
No. 1 B. & S. Univ. Mill. Mch. with div. hd. and vise	750.
No. 2 Knight Milling and Drilling Machine p. f., m. d.	550.

## MISCELLANEOUS

No. 5A high speed Riveting Hammers pract. new (3) ea....	\$ 300.
No. 4 Lees-B. Thread Miller..	325.
No. 3 B. & S. 36" Gear Cutter.	300.
No. 6 36" Fellows Gear Shaper	275.
25 lb Little Giant Pwr Hammer	100.
5 H.P. 60c., Ransom 24" Snag- ging Grinder.....	160.
10P Marshalltown Throatless Shear.....	200.

This is a partial list of machinery that we  
have in stock—Send us your inquiries,  
as we may have what you want.

**The Toledo Mchy. Exchange**  
**18 North St. Clair St., Toledo, Ohio**



# Look - Over - This - List

## Iron and Sheet Metal Working Machines

### Presses

- No. 56 Toledo S. S. B. G. 4" Stroke, Wt. 14000 lbs.  
 1—No. 21 Bliss O. B. L., wt. 3800 lb. each, stroke 24".  
 No. 2 Robinson Plain S. S. Press, wt. 3500 lbs., 2" stroke.  
 No. 3 Bliss Stiff Back Press, wt. 3000 lbs., stroke 14".  
 No. 15 Waterbury Pl. S. S. 24" bet. Housing 5" Stroke Wt. 6000 lbs.  
 4—Plain Fly Wheel Presses, wt. 2000 lbs. each, 14" stroke.  
 No. 63A Waterbury Farrell S.S.B.G. 6" and 8", Stroke 21" Bet. Housing Wt. 9000 lbs. (2).  
 No. 39 Bliss Horn Presses with adjustable tables, (2).

### Punches

- No. 4 Long & Allstatter Single End Back Geared, capacity 1/4" thru 1/2".  
 No. 6 Whiting Single End, Back Geared, capacity 1/4" thru 1/2".  
 1—Bertsch Rapid Production Punch 15" throat, archt. jaw, wt. 3500 lbs.  
 3—No. 15 Toledo 15" throat.

### Press Brake

- 1—10' Streine (POORMAN type) Power Press Brake, 3/16" capacity, arranged for mtr. dr., wt. 40000 lbs.  
 4' Robinson Hand Brake 10 g. cap.

### Shapers

- 20" Steptoe B. G. Crank, (2).  
 16" Steptoe Plain Crank.  
 16" Ohio Plain Crank.  
 15" Potter & Johnson crank shaper, cone drive, power down feed.  
 12" Steptoe Plain Crank.

### Bolt Cutters

- 1" Landis single head (with dies).  
 2" Acme Model B. (without dies).

### Millers

- No. 1-B Brown & Sharpe Cone Dr.  
 No. 1 1/2 Cincinnati Universal.  
 No. 3 B. & S. Plain, Cone Drive.  
 No. 4 Cincinnati Plain.  
 No. 2 Becker Vertical.  
 No. 3 LeBlond (Univ.) Cone Drive, 3 step, d. b. g.

### Radial Drills

- 3', Mueller, Plain, C. D.  
 4', Fosdick, Plain, C. D.  
 6', Dreses, Plain, M. D.

### Square Shears

- 2—24" Foot Power Square Shears.  
 3—30" Foot Power Square Shears.  
 1—Whitcomb Power Slitting Shears.  
 1—8' Power Square Shear, cap. 20 ga.  
 1—10' Bertsch Power Square Shear, overhead drive, 14 gauge capacity.  
 12' Streine Power Square Shear, under-drive type, 16 gauge cap.  
 No. 15A Niagara Circle Shear.

### Lathes

- 18"x8' Mueller cone drive, q. c. standard equipment.  
 20"x8' American quick change c. d., s. b. g. standard equipment.  
 24"x12' Boye & Emmes quick chge. c. d. d. b. g. standard equipment.  
 24"x16' Bradford standard screw cutting.  
 36"x14' Putnam semi-quick change, triple geared, internal face plate drive.  
 27x18', Bradford, 3 s., dbl. b. gear, and taper attachment.

### Hack Saws

- 7x7 Atkins Quick Cut S. P. Drive.  
 12x15 Racine High Speed with 3 speed transmission drive.  
 13x15 Racine High Speed with 3 speed transmission drive.

**We are in the market to purchase first class machinery: What have you for sale?**

**The Jones Machine Tool Co.**  
**Front & Pike Sts., Cincinnati, Ohio**

**Strengthen Your  
Production With**

# MOREY TOOLS

## BORING MILLS

- 1-Bullard 8" Mult-au-Matic.
- 1-Bullard 24" New Era.
- 1-Bausch 42" vertical, 2-heads.
- 1-Niles 42" vertical, 2-heads.
- 1-Putnam 44" vertical, 2 heads.
- 1-Betts 10" vertical, 2-heads.
- 1-N-B-P 10-16" vertical, 2 heads.
- 1-Pond 10-24" vertical.
- 1-Cleveland 24" bar, horizontal.
- 1-Universal 30" bar, horizontal.
- 1-Pawling & Harnischfeger 34" bar
- 1-Detrick & Harvey 4" bar, hor.
- 1-N-B-P 44" bar, duplex cont. hor.
- 1-Rockford No. 2 horizontal.

## DRILLS—Multiple Spindle

- 16-Bausch Nos. 1, 2, 3 and 4.
- 8-Detroit 5-spindle.
- 4-Natco Nos. 11 and 30.
- 1-P. & W. Nos. 12, 13.

## DRILLS—Upright

- 1-Allen 4-spindle.
- 2-Barnes 20" and 24" camel back.
- 1-Foote-Burte 4-spindle.
- 6-Henry & Wright 2, 3, 4, 6-spdl.
- 1-Pratt & Whitney No. 2 gun brl.
- 1-New Turner No. 3 vertical.

## DRILLS—Hand

- 1-Cincinnati 3'.
- 3-Western 3' plain.
- 1-American 4' plain, trip. purpose.
- 4-Amer. 6', 7', 8' plain, trip. pur.
- 1-Bausch 6'.
- 2-Dresses 5', 6' plain.
- 1-Cincinnati Bickford 6' plain.
- 1-N-B-P. 96" plain.
- 1-Cincinnati Bickford 6' universal.

## GEAR CUTTERS

- 7-B. & S. 3x26, 3x36, 4x36.
- 3-B. & S. No. 6, 60" cap.
- 1-G. & E. No. 18-H.
- 1-Cincinnati 16" Gear Hobber.
- 3-Fellows Gear Grinders
- 3-Gleason 15" spiral bev. roughers.
- 4-Gleason 6", 11", 18".
- 1-Gleason 24" bevel gear planer.
- 3-Fellows Nos. 6, 61, 615.

## GRINDERS

- 3-B. & S. Nos. 1, 2, 3.
- 4-Cincinnati No. 2, 12x36, plain.
- 9-Landis 6x18, 10x24, 10x36, 12x36, 12x96 plain.
- 7-Norton 3x18, 6x32, 10x24, 10x36, 10x50, 16x36, 10x72 plain.
- 2-Landis 10x52 cam.
- 1-Heald 8" rotary surfacer.
- 1-Persons-Arter 8" surfacer.
- 1-Springfield Brandes vert. grind-  
ing planer.

- 12-Heald Nos. 65, 60, 70.

- 1-Bath Spline.

## HAMMERS

- 1-New Bradley 30 lb. helve.
- 1-Chamberburg 400 lb. bd. drop.
- 1-B. & S. 800 lb. drop.
- 1-Toledo 1500 lb. bd. drop.

## MILLING MACHINES

- 2-Cincinnati 18" duplex.
- 6-B. & S. Nos. 2, 2B, 3, 4, plain.
- 8-Cincinnati Nos. 2, 3, 3-S, 4 plain.
- 2-Garvin No. 134 plain.
- 3-Garvin Nos. 14, 2A universal.
- 13-Becker Nos. 3H, 4B, AB, 5C, 6, C1, vertical.
- 7-P. & W. 4x12, 6x14, 6x48, 6x80 th.
- 11-P. & W. 5", 8", 10", 12" auto.

## LATHES

- 1-Hendey 16"x8", geared head.
- 6-Lodge & Shipley 18"x8" selec-  
tive gear head, with taper att.
- 3-LeBlond 26"x10" duplex crank.
- 1-Johnson 30"x12", m. d.
- 1-Hendey 24"x12".
- 1-Bridgford 42"x38"; grd. hd.
- 1-American 36"x24".

Lathes of all sizes and types.

## SCREW MACHINES—Automatic

- 14-Cleveland 3", 3", 4", 4", "A"
- 4-Cleveland 4", 4", 4", 4", "B"
- 17-Gridley 4", 3", 14", 18", 14", 24",  
4-spindle.

- 10-Gridley 34", 44" single.
- 6-New Britain Nos. 23, 24, 53.
- 4-Nat'l Acme Nos. 52, 54, 56, 515.
- 11-P. & J. No. 5-A, No. 6-A.

## TURRET AND SCREW MCHS.

- 1-Acme Fox Monitor.
- 6-Foster Nos. 2, 4, 6.
- 4-Greenlee 24x26.
- 16-J. & L. 24x24, 3x36.
- 1-Libby 28", 44" hole.
- 1-W. & S. No. 6.
- 1-B. & S. No. 6.
- 1-Steinlee 24" Turret.

## PLANERS

- 2-Putnam 28x26x16", 2 heads.
- 1-Gray 38x38x20", 3 heads.
- 1-Woodward & P. 36x36x16", 4 hds.
- 1-Detrick & Harvey 30"x10", single  
head, openside.

## SHAPERS AND SLOTTERS

- 1-Gould & Eberhardt 20".
- 1-Cincinnati 20".
- 1-Dill 15-18" Slotter.
- 1-Niles 30" Slotter.

## MISCELLANEOUS

- LaPointe Broaches (Hudson & New  
London) 1, 2, 3 and 4.

*This represents but a portion of our stock. Send us your  
inquiries—we have just made an attractive purchase.*

**MOREY AND CO., INC.** 408 Broome St.,  
NEW YORK, N. Y.

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# **Need Grinders ?**

16"x96" Landis Plain Grinder.

14"x72" Norton Plain Grinder.

6"x32" Norton Plain Grinders.

Pratt & Whitney Vert. surface, table 40"x15".

No. 2 Walker universal cutter and tool grinder with unit drive and equipment.

No. 1 Norton universal cutter and tool grinder with 4 speed countershaft, power feed and equipment.

Ott internal grinder, collet chuck for holding work.

## **Other Machines**

No. 165 Consolidated double crank press, 2½" stroke.

No. 74 Consolidated geared press, 4" stroke.

No. 4 American Can inclinable press.

15" Dill slotter, nearly new.

36"x15' Betts planer, two heads on rail.

No. 4 Millholland screw machines (4) New.

No. 3 Cincinnati high power vertical miller.

No. 3 Cincinnati plain miller.

Nos. 6, 5 and 4-B Becker vertical millers.

1¼" Cleveland model A & B automatics.

**Punches and shears, lathes, drills, bolt cutters,  
pipe machines and many others.**

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## **A. D. WHITE MACHINERY CO.**

**108 N. Jefferson St.,**

**Chicago, Ill.**

# Attractive Prices To Move Stock

- BORING MILLS:**----- D. & H. Horizontal Floor Borer 5" bar.  
Niles Knee Type Horiz Boring & Mill. Mche. 7" bar.  
Barrett Hor. Boring Mills, 7" bar and 5" bar.  
Niles 36", Gisholt 42", Colburn 72", Betts 7'/10' Vert.
- DRILLS:**----- 20" Snyder, 24" Weigel, 14" Rockford.  
4" Western; 10" Bausch Radials.  
2" Fostick, 3" Bickford, t. a.  
Moline 10-spindle, No. 5 Morse taper.  
Bausch Multiple Drill, 12-spindle.
- LATHES:**----- 14"x6' Hendey, t. a.; 10"x5' Reed.  
16"x8' 7" American, h. s., t. a.  
24"x12' Rockford, taper att.  
24"x12' 10" American g. c. g.  
26"x16' Prentice, taper attachment.  
36"x18' Porter.  
18"x12' Roll Turning.  
1"x15" Pratt & Whitney Turret Lathe.
- MILLING MCHES.:**--- No. 1 Cincinnati Universal, Garvin No. 12 Plain.  
Ingersoll Fixed Rail, 24"x21"x20' table.
- PUNCH & SHEAR:**--- Canedy-Otto, hand power, 1/2"x1/2".  
Beatty No. 7, 42" throat, cap. 1"x1".  
No. 6 Long & Allstatter S. E.  
Roversford No. 3, 16" throat 1"x1".  
Cleveland "EF", 36" throat 1 1/4"x1".  
Kent Sgt. End, 24" thr., 1"x1".  
Industrial Double End, 7/8"x7/8".  
No. 2 Hilles & Jones hor. punch, 8" throat.  
Doelger-Kirsten No. 2 Alligator, high knife.  
Marshalltown No. 10-P Throatless.  
Bertch Plate Shear 10"x1/4".
- GRINDERS:**----- Bridgeport Knife & Drill.  
Besly No. 3 Disc.  
Cincinnati 10"x48" Grinder.  
Cincinnati 12"x72" Plain Cylindrical Grinder.
- SHAPERS:**----- 14", 24" Gould & Eberhardt, b. g.
- MISCELLANEOUS:**--- Band Saws, Crescent 36"; Frank 30".  
Hammer, 250 lb. Little Giant m. d.  
Planer, 28"x28"x6' G. & E.  
Planers, Cincinnati 48"x44"x12'.  
Planer, Flather 48"x48"x16' heavy duty.  
Planer, 48"x48"x16' D. & H. Openside.  
Planer, Detrick & H. Openside, 96"x72"x26'.  
Presses, No. 3 V. & O.—O. B. I.  
Press, No. 18 Bliss, Perkins.  
Press, 50 ton Lourie Hydraulic.  
Presses, Arbor, 20 ton Weaver; No. 3 1/2 Greenerd.  
Profiler, P. & W. table 12"x15", double spindle.  
Saw, Hunter 24" hi-speed, m. d.  
Saw, 18" Higley Cold.  
Saw, No. 3 Sterling Hack 9"x9".  
Screw Machine, 2 1/4"x11" Acme.  
Screw Machine, Meriden, 6 hole turret.  
Surface Plate 44 1/2"x6' 8", 6 1/2" thick.  
Wire Straighteners, Schuster 1/4"x1/8".

## RUSSELL MACHINE COMPANY

1447 Oliver Building,

PITTSBURGH, PA.

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—“this certainly appears to be a very fine piece of machinery, and we feel we are quite fortunate in securing it at the price quoted.”—

These comments received unsolicited from a recent purchaser of McCabe used machinery equipment.

Your inspection invited, in fact urged, but if inconvenient you can order with the same assurance you would have with new equipment.

*A few of the items which have passed our tests and are ready for installation:—*

24" Cincinnati B. G. Shaper  
No. 3 Hendey Plain Milling Machine.  
3' Arm Speedy-Sensitive Radial Drill  
4' Arm Carlton Radial Drill  
24/40"x12' bed Goared Head Quick Change Lathe  
26/48"x14' bed, "2-in-1" Double Spindle Lathe  
18"x10' bed High Duty Lathe  
14"x8' bed High Duty Lathe.  
4½" Bar Horizontal Boring Mill.

New—10' Set Bending Rolls, Drop End

New—Lathes—18" to 42" swing in stock

**J. J. McCabe Lathe & Machinery Corp.**

149 Broadway,

NEW YORK CITY

# **"You Will Find It Here"** **USED MACHINE TOOLS**

- B-2716—Cincinnati No. 3 Vertical Spindle Milling Machine.
- B-2556—Cincinnati No. 3 Plain Milling Machine.
- B-2542—Cleveland No. 2 Plain Milling Machine.
- B-2613—American No. 1½ Plain Milling Machine.
- B-2688—Brown & Sharpe No. 1 Plain Milling Machine.
- B-2170—Knight No. 1 Drilling and Milling Machine.
- B-2109—Barber-Colman Vertical Spindle Circular Milling Machine.
- B-2649—Pratt & Whitney Small Thread Miller.
- B-2583—26"x10' David Pond Loose Change Gear Engine Lathe.
- B-2581—21"x12' Bradford Standard Engine Lathe, S. B. G.
- B-2757—21"x10' LeBlond Heavy Duty Screw Cutting Engine Lathe.
- B-2217—20"x14' Bradford Loose Change Gear Engine Lathe, S. B. G.
- B-2648—18"x8' Lodge & Shipley Pat. Geared Head Engine Lathe.
- B-2697—18"x8' Cincinnati Quick Change Gear Engine Lathe, D. B. G.
- B-2699—16"x8' Hendey Quick Change Gear Engine Lathe, S. B. G.
- B-2582—16"x8' Bradford Standard Engine Lathe, S. B. G.
- B-2236—15"x8' American Quick Change Gear Engine Lathe, S. B. G.
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- B-2464—14"x6' Bradford Loose Change Gear Engine Lathe.
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CINCINNATI DAYTON COLUMBUS

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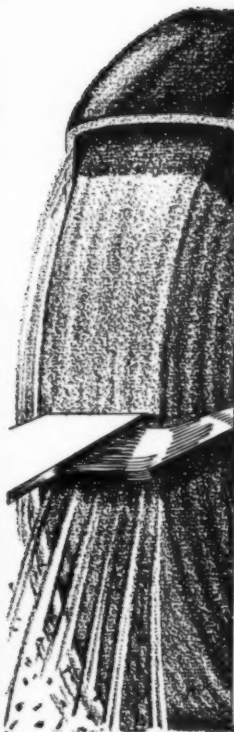
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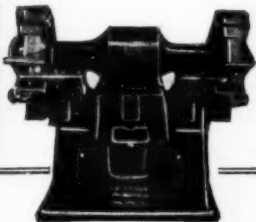




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